

## CHAPTER V

### HIGHLANDERS' CRITERIA AND CHOICE

Modernization of agricultural technology has produced both favourable and undesirable effects to the highland swidden society. It is frequently a rather detrimental force for the highlanders to embark on those new agricultural options in terms of environmental and economical circumstances. Under such risky circumstances, farmers have to cope with a number of difficulties to maintain their lives. In this section, the adaptive practices of highland farmers is examined by looking at their decision-making and various criteria for new agricultural options in the Pwo Karen community under the changing conditions of their production system.

In order to differentiate the villagers' class, the amount of cash income mainly gained by cabbage cultivation and wage labour is used as a basic indicator in Ban Mae Chang and Ban Dong Lang (see Table 3.1, 3.2 and 3.3). The cash income indicators reflect almost the entire economic activity of the villagers in Ban Mae Chang. In Ban Dong Luang, however, their economic activity has been variegated not only by cash cropping, but also by some illegal trading. Thus, I apply the cash income in Ban Dong Luang to only agricultural products and wage labour as well as the case of Ban Mae Chang.

The socio-economic survey was conducted during December 2002, and interviews with the villagers were in January, February and March 2003 with the help of a local NGO informant and two village assistants.

#### 5.1 Risk of Cash Cropping for Highlanders

In this section, I analyse how cabbage cultivation has created a large gap between successful and unsuccessful farmers. For all farmers, many kinds of *risk* are unavoidable in agriculture. However, under such uncertainty, why and how can the rich make a profit from cabbage cultivation, but the poor cannot? How does each household adopt the new

choices in each condition, and how do agricultural technologies perform in both society and the natural environment around the people? For these points, the adaptive practices of each class to agricultural transformation is investigated by presenting case-studies in consideration of the impact of cabbage cultivation.

### 5.1.1 Introduction of New Technology in Highland Farming

Firstly, the outline in which I discuss the situations of technological innovation in the case of cabbage cultivation is as follows.

**Table 5.1**

<b>Section: 5.1.1 Introduction of New Technology in Highland Farming</b>		
<b>Village Site</b>	<b>Socio-economic Status (The Case of Household)</b>	<b>Key Characteristics</b>
BMC <sup>1</sup>	Rich (1)	Successful use of chemical fertilizers in both cabbage and rice
BMC	Poor (2)	Less success with chemical use to increase rice productivity
BMC	Rich (2)	Successful commercial cabbage cropping by utilising advantageous network
<b>Key Points</b>	<b>1. Suitable Technologies for the Environment</b>	
	<b>2. Accumulated Knowledge to Use Technology</b>	

From the abovementioned three cases of the rich and poor in Ban Mae Chang, which I will be elaborated below, the determining factors of success in cabbage cultivation can be divided into two main points: (1) use of technology that is suitable for the environment; and (2) accumulated knowledge about how to use the agricultural technologies. However, the chemical fertilizer technology is directly related to cash-income status of the producer. The poor are less likely to be able to successfully farm cabbages since they

<sup>1</sup> “BMC” refers to Ban Mae Chang in this chapter. Following “BMCB” is Ban Mae Chang Bon, and “BDL” indicates Ban Dong Luang.

neither have capital to invest nor do they have enough knowledge to appropriately conduct commercialized farming.

Historically, “technology” has been regarded as the bedrock of development and an indispensable factor to effectively harnessing natural resources. Meanwhile, the efficiency and deleteriousness of technology have been also argued by many theorists, for example, the polarized “technology optimists” and “technology pessimists” (Desta 1999:165-170). In agriculture, the introduction of new high-yielding seed varieties and improved land and water management allow farmers to enjoy better productivity, in theory. Virtually, however, negative effects of technology have been generated in actual local situations. For instance, the obvious adverse effects of technology-driven economic growth through cash cropping can be frequently seen in the gap of livelihood between successful richer farmers and poor, debt-ridden farmers. Yet, it is more crucial that the introduction of foreign and hybrid seed varieties are vulnerable to plant disease epidemics, and worse than that, bring about destructive consequences that threaten the genetic diversity of indigenous varieties (Yongyuth 1989:329-330).

In this respect, both the rich and the poor in Ban Mae Chang have experienced the disaccord between the soil in local geographical conditions and artificial fertilizer by technology-innovation:

**Case: BMC-Rich (1)**

***The Advantaged with Success in Cabbage Cultivation (1)***

Mr. A is 54 years old, working as an official since 1995, and is a direct descendant of the traditional village headman. He supports a wife and a son who is studying in senior high school outside town. The eldest son and daughter are married and residing in his neighbourhood. Since 1996, he has been growing cabbage with his daughter and her husband. Cabbage cultivation is carried out in his 2 *rai* of swidden field in Ban Mae Kanai. About his swidden field, he says:

“Before, our rice productivity was actually better than now because of the longer fallow. The soil has been degraded since around ten years ago because we cannot fallow the land long enough to rejuvenate as before. Now we have to apply more fertilizer every year. But so far so good for me, fortunately, I can make profit to increase cash income in my household. Only thing I hope for is that the road will be paved to Mae Ho.”

**Case: BMC-Poor (1)*****The Farmer Struggling with Rice Shortage and Cabbage Debt***

Mr. M has not farmed cabbage for the past three years. Ten years ago, he sometimes grew cabbage in his swidden nearby Ban Dong Luang. He failed to make a profit all the time. Worse than that, he never achieved rice sufficiency in his swiddens. He does not have terraces. He does not exactly know the reason why his rice is always lacking although he is aware of soil degradation due to the reduced fallow period. Mr. M questions that:

“I do not understand why my rice productivity is always low. As everyone is aware, I am sure the primary reason for my rice shortage is that the soil has become poorer and poorer due to population growth and short fallow. My friends in the village, whose life-standard is the same as mine but who grow cabbage, enjoy a high yield of rice. I have tried to increase rice productivity so I have applied fertilizer like them in my field. But rice is still scarce. Why? Because the labour force by my wife and me is not enough?”

There are at least four kinds of “technology” that have contributed to agricultural changes in the Pwo Karen communities; (1) chemical fertilizer for cabbages, consequently, for dry rice as well; (2) pesticide for cabbage; (3) power cultivator ploughing for wet rice farming; and (4) sprinkler instalment for cabbage cultivation. The former two technologies are carried out both in terraced and swidden lands, and the latter two are used in terraced field. Each technology available under monetary exchange is secured. The abovementioned technologies are selected for use according to the farmers’ economic status, and the flow of those four instruments from (1) to (4) represent the order that the farmer is more dependent on these technologies and cash in the research site. In other words, these technologies are inaccessible for the poor who do not have enough capital. Access to sprinklers, at the level of (4), is exclusively available to the richest farmers in the community, as the case below demonstrates.

**Case: BMC-Rich (2)*****The Advantaged with Success in Cabbage Cultivation (2)***

Mr. B, the son in law of Mr. A (Case: BMC-Rich (1)), is from Ban Dong Luang. He is an expert in cabbage cultivation with a career in cash cropping in his home village. He gained 10 *rai* of swidden field in Ban Mae Kanai around 2000, and started to grow cabbage in the field in the rainy season. The wife of Mr. B, the daughter of Mr. A, inherited the sole

terraced field (3 *rai*) situated nearby the village residential area, so that they can grow wet rice in the rainy season and cabbage in the dry season. Mr. B's family has practiced intensive cabbage cultivation throughout the year by utilizing their privileged status as the lineage of village founders who own terraces in better places.

Mr. B failed only once in cabbage with his parents in Ban Dong Luang in 1999, before he had gained the land in Ban Mae Kanai. Born and raised in Ban Dong Luang, he experienced the agricultural transformation from traditional farming to new cabbage-mixed farming with his parents. In Mr. B's case, however, his parents owned terraced land together with swidden fields so that rice was regularly enough for them. When Mr. B was about 20-years-old, his parents and family embarked on cabbage cultivation in Ban Dong Luang. Mr. B is proud of his cabbage farming skills, and asserts that he will be engaging only in cabbage all the time in the future.

In the case of Mr. B, the household is the richest in Ban Mae Chang from cabbage farming in both rainy and dry seasons of 2002 because of the use of sprinklers. Meanwhile, their rice output 2002 is only 50 *thang* from terrace in total. Their strategy is to cultivate cabbages as intensively as possible, in order to make a profit to sustain their life, relying on technological innovations they can afford.

### 5.1.2 Benefit or Liability: Impacts of Agricultural Technology

Secondly, I investigate the fact and impact of these technologies that have been introduced by cabbage cultivation in swidden society. The gap within the community, in which the rich get richer while the poor get poorer, has been widened by the expansion of cabbage cultivation during the dry season. The development of sprinkler-irrigated-systems through the investment of rich farmers has allowed them to make larger profits to produce more cabbages with a lot of chemical input throughout the year.

**Table 5.2**

**Section: 5.1.2 Benefit or Liability: Impacts of Agricultural Technology**

Village Site	Socio-economic Status (The Case of Household)	Key Characteristics
BMC	Poor (2)	Giving Terrace to the Rich for Repaying Debt
BDL	Rich (1)	Large Terraces for Rice Security, and Swidden for Commercial Cropping



BDL	Poor (1)&(2)	Debt from Cabbage Cultivation and Reduced Rice Security in Vicious Circle
Key Points	<b>1. Land-Security and Use by the Rich and Poor</b>	
	<b>2. Relying on Chemical Input or Maintaining Fallow System</b>	

If the crops are eaten by worms on a large scale, the farmer cannot sell it and would fail in cash cropping for the season. Pesticide input is an inevitable process in cabbage cultivation, even though the Pwo Karen farmers in my research site insist on their low use of insecticide, only one-sixth the amount of lowland farmers, as mentioned in CHAPTER IV (section 4.2.2.1). Although it is hard to prove its credibility in practice here, the study by Kanok and Benjavan (1994:63) supports these claims. The Pwo Karen farmers in Ban Dong Luang say that they do not apply pesticide until they find insects, which is the same description as the report that the cabbage farmers of the Skaw Karen in Mae Sariang generally wait until they see “a number of some particular kinds of insects” before starting to spray (*ibid.*). Besides, all the farmers interviewed in the research of Kanok and Benjavan answered that “wet season cabbages are less severely infested with insect pests than dry season crops (*ibid.*),” which suggests that since the majority of Pwo Karen presently grow cabbage only during the rainy season they do not need to use much pesticide.

However, this is not only the benefit of cabbage cultivation in cooler highland weather. Furthermore, it implies that their use of pesticide will be necessarily increasing if the intensive cash cropping is extended to dry season. Since 2000, some of the richest farmers have conducted intensive cabbage cultivation during the dry season by using sprinklers, at least two plots of about 8 *rai* in total, inside and nearby the residential area of Ban Mae Chang. One case is that a big cabbage farmer in Ban Dong Noi has started using the 5 *rai* of terrace near by Ban Mae Chang, which was given as security by the owner in Ban Mae Chang, to grow cabbage during the dry season. The context of why

the terrace was transferred to an outside farmer for intensive cabbage cultivation is as follows:

**Case: BMC-Poor (2)**

***The Rice Farmer Mortgaging Terrace to Cabbage Farmer***

There is a terraced field near Huai Mae Chang, in which cabbage cultivation has been done during dry season since 2000 using sprinklers. It originally belonged to the Ban Mae Chang villagers, and the location of the terrace is inside the territory of Ban Mae Chang. However, this land has been used by one of the successful cabbage farmers in Ban Dong Noi, the satellite part of Ban Dong Luang for two years. Mr. N, the former owner of this terrace from Ban Mae Chang, allowed the outside villager to use the land for their wet rice and cabbage cultivation. There is a contract between two families pawning the land due to the following reason:

“Our father had been in sick for a decade. He needed medical treatment, and our family members had been burdened with its high cost. My father owned 5 *rai* of terraced field but this was not in use for 8 years because of his health condition. One day at the time, we went to see the cabbage farmer in Ban Dong (Ban Dong Noi) to ask them to give us money to pay for our father’s medical treatment by mortgaging his terrace for their cabbage farming.”

Mr. N and his siblings would regain the land if they could return the required money to the Ban Dong villager. A Village Fund loan was taken out in 2002 (15,000 baht) to partially use for the father. If they can use the terrace, what they hope to do in the land is:

“If we have money, like the Ban Dong villager, we also want to grow cabbage in the terrace during the dry season. If we could install a water supply system such as a sprinkler, we could grow any kinds of cash crop in the terrace. We cannot afford it, unfortunately. Because there is not with a lot of water in the terrace, even during the rainy season, coffee might be better than cabbage there for us. Moreover, nobody will come to this village to buy coffee like they do for cabbage. There is no way for us to sell the crops except if outsiders come to buy it.”

In 2002, two years after the above case, the young rich cabbage farmer in Ban Mae Chang (Case: BMC-Rich (2), Mr. B) has also embarked on cropping in the same way. The former case is situated at the confluence of two large streams, Huai Mae Chang and Mae Lod Klou, and the latter is at the meeting point of a smaller stream, Thi Pu Klou, and Mae Lod Klou (see Figure 3.4). The previous study in the case of the Skaw Karen in Mae Sariang district (Kanok and Benjavan 1994:63-64) reports that if more

highland farmers require water, such as sprinklers or irrigation, competition of water resources in dry season will increase. Besides, as mentioned already, as more farmers grow cabbage in the dry season, pesticide demands will rise. Not only the competition for water grow among the farmers, but there will also be more threat of insects. Consequently, it will harm the highlanders' health due to detrimental side effect.

In the case of fertilizing soil, the villagers in the region are using at least three kinds of chemical for cabbages. According to the previous research in the middle of the 1990s, the primary formulate fertilizers for cabbage are the type 16-20-0 (*i.e.* N-P<sub>2</sub>O<sub>5</sub>-K<sub>2</sub>O at the proportion of 16-20-0%) and ammonium sulphate (Kanok and Benjavan 1994:59). In my research site, approximately 500 kg of fertilizer<sup>2</sup> (16-20-0) is applied for 3 *rai* of cabbage field (surveyed on August 15<sup>th</sup> 2002). Another one, for the final stage in the cropping, is the type 21-0-0. All the cabbage farmers in the Pwo Karen community follow the method of mixing these three kinds of fertilisers since it is indispensable for sale. The fertilizer for cabbage usually works for rice farming in the same field until next season. Kanok and Benjavan (*ibid.*) reports that the rice gets enough fertilizer left over from cabbages in the Skaw Karen village, Mae Rid Pagae, in Mae Sariang in the middle of the 1990s.

In Ban Dong Luang, the richer farmers have enjoyed a higher yield of rice than before, and have been satisfied with the output. However, putting more chemicals into their soil year by year, they have become aware of the deterioration of soil, and are worried that their soil will become sterile within a decade in their mind (interview with the richer villager; Mr. B' in Ban Dong Luang). Although it is impossible here for me to prove how the soil has been eroded by intensive chemical input of cabbage in their swidden soil with empirical data, it is sure that the villagers need to make up for the rice shortage with terraced farming or cash income from cabbage cultivation to purchase daily rice. All the farmers who enjoy a self-sufficient rice output 2002 own terraces in both Ban Mae Chang and Ban Dong Luang (see Table 4.2 and 4.3 in CHAPTER IV). The following cases in Ban Dong Luang show the different conditions of the richer group and

<sup>2</sup> One bag (*thung*) of fertilizer contains 50 kg. One of the cabbage farmers in 2002 reported to use 16-20-0



the poorer group, each actual rice productivity and, possibly, imply soil reduction.

### **Case: BDL-Rich (1)**

#### ***The First Group to Cultivate Cabbage and to Hold Terraces***

The richest household (A') in Ban Dong Luang, owns a car, a motorcycle, twenty cattle, and 8 *rai* of wet rice field. Their annual agricultural revenue in 2002 was 100,000 baht from cabbage cultivation, making a profit of over 50,000 baht. The family (A') has been growing cabbage for over ten years. The family (A') totally relies on the wet rice in their 8 *rai* of terraced field, which generated 300 *thang* of harvest in 2002. Since their wet rice yield is always enough for the family, they do not grow dry rice but grow cabbage in their swidden field in 10 *rai* for one plot. They own three farming plots, out of that the family uses one or two plots for cabbage every year. When the family (A') does not use the other plots, the relative family grows dry rice or cabbage in the land. Their swidden land has been continuously used for cabbage and dry rice without a fallow period for over a decade.

### **Case: BDL-Poor (1) & (2)**

#### ***Later Cabbage Farmers in A Vicious Circle***

The family of Mr. C' consists of three family members. The household uses three plots, each of which is approximately 3 *rai*, to grow dry rice every year, and cabbage every two years. The dry rice yield 2002 of Mr. C' is 150 *thang* which is enough for the family. The family of Mr. C' has been more actively involved in cabbage cultivation since three years ago. At that time, an investor in Mae Sariang gave them a chance to embark on cabbage cultivation. After that they have grown it from their own budget, but have not yet made a profit, just gained increasing debt. Although their dry rice harvest was enough for the year 2002, they were concerned that their rice productivity was worse than before. The family held ten pigs and twenty chickens during my field survey. They borrowed 10,000 baht from the Village Fund in 2002.

Another family in the poor class also adopts the same rotation for their farming of dry rice and cabbage as the Mr. C' case. Mr. D's household consists of himself, his wife and three small children. His household also supports the aged mother in law, who is residing next door. Mr. D' uses two plots, each of which is about 4 *rai*, for dry rice every year and grows cabbage every two years. His family has grown cabbage since three years ago. The manner of cabbage cultivation in his family is once every two years. In 2002, they only grew dry rice in 4 *rai* of one field, in which they got 70 *thang* of harvest, a poor crop as usual. They supplemented another 30 *thang* of rice by purchase. During my field survey, Mr. D's family had only one pig, which is for use in ritual ceremonies, not for sale. He did not borrow from the Village Fund 2002.

### **5.1.3 Changes in Values and Economic Security**

Thirdly, I focus on how internal changes amongst the Pwo Karen farmers has

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fertilizer of 10 *thung* for 3 *rai* of cabbage.

been generated by gaining new criteria for their farming in accordance with their involvement in cabbage cultivation.

**Table 5.3**

<b>Section: 5.1.3 Changes in Values and Economic Security</b>		
<b>Village Site</b>	<b>Socio-economic Status (The Case of Household)</b>	<b>Key Characteristics</b>
BMC	Poor (3)	Successful in Securing Rice by Using Swidden and Terrace
BMCB	Rich (1)	The Subsistence Cultivator, but Eager to Trade <i>Catch</i> Crops from Swidden
BMC	Middle (1)	Young Generation's Perspective on Farming
<b>Key Points</b>	<ol style="list-style-type: none"> <li><b>1. Attempt to Increase Utility in Their Own Methods and Conditions</b></li> <li><b>2. Farming Concerns Centred on Food Security in Highland Life</b></li> <li><b>3. Highlanders caught between Economic-Incentives and Cultural Values</b></li> </ol>	

In a utilitarian point of view, cabbage cultivation is the most effective and quick way to make cash income, although it is not so reliable in terms of fluctuating market prices, and it is inaccessible for the majority of highland households in many respects. In any case, cabbage cultivation is very attractive for those who have always searched for better choices to increase their utility in the production system. Regarding the unstable nature of cabbage cultivation, how do they manage the risks of market price, labour allocation, and rice security?

**Case: BMC-Poor (3) *The Successful Rice Farmer in Swidden and Terrace***

Mr. L owns a large terraced field in total of 14 *rai*, together with 15 *rai* of swidden. He has undertaken cabbage cultivation four times over the past ten years; three times were the investment of a villager of Ban Huai Pla Kang. All of the trials failed. If he has the chance to grow cabbage, he would like to do so. It is, however, unnecessary for him to engage in cash cropping since he can get enough rice from large-scale swidden and terraced fields. At the same time, it is almost impossible for Mr. L to put his time and labour into cabbage cultivation since he cannot afford to hire labour. Why Mr. L wants to grow cabbage is:

“Because I envy the villagers in Ban Dong Luang and Ban Huai Pla Kang who are making profit by cabbage farming. I want to follow this way to gain more cash if possible. Between cabbage and rice farming, cabbage harvested after only 3 months, is much easier than rice. In my swidden I do not have money to apply fertilizer for cabbage and rice, but it does not matter because rice productivity is enough for family.”

Sufficient rice yield secured by wet rice farming is the reason why Mr. L does not need to grow cabbage. In the case of Mr. L, he owns such large terrace and swidden that rice productivity is normally rich. However, from the standpoint of a positive-attitude to cash cropping, he describes the merit of cabbage that it is quickly harvested, taking only three months, which is much shorter than dry rice farming, which requires around ten months.

On the other hand, there is the case of a farmer who has negative ideas about growing cabbage even though he gets benefit from cabbage cultivation as a labourer.

#### **Case: BMCB<sup>3</sup>-Rich (1) *The Subsistence Cultivator***

Mr. P, the 58-year-old man serving as the traditional religious leader, cultivates about 10 *rai* of dry rice in one year for 7 family members. He has never grown cabbage in his life but conducts subsistence farming in his field, which is approximately 60 *rai* in total. He does not own wet rice fields. In his dry fields, he plants various kinds of vegetables together with dry rice;

“I do not want to grow cabbage in my field, because cabbage is not for our consumption. In the dry rice field, I can grow only edible crops for our meals such as several kinds of potato, corn, pumpkin, beans, sesame, cucumber, chilli and other vegetables. Contrary to dry rice which is certain to grow, cabbage is so risky.”

However, this does not mean that this farmer is neither interested in making profit by cabbage production, nor does he refuse wider choices in agriculture by adhering to traditional farming. In the case of Ban Mae Chang Bon, the village is located at a more accessible point from the route neighbouring Pwo Karen villages, such as Ban Dong Luang and Ban Huai Pla Kang, than the mother part of Ban Mae Chang. Utilizing a more convenient location to the outsiders who have money to buy crops and livestock, some of the villagers, including the traditional village headman, actively trade their swidden

<sup>3</sup> In this section, some narratives and experiences among the villagers of Ban Mae Chang Bon are used since it shows relevant connections to the investigation of agricultural adaptation.

crops.

If the yield of *catch* crops is enough to sell, and if some outsiders come to buy vegetables and animals in Ban Mae Chang Bon, Mr. P sometimes has occasion to sell them. Several traders from Mae Ho, Mae Sariang, Chiang Mai and other neighbouring villagers of Ban Huai Pla Kang and Ban Dong Luang, often come to Ban Mae Chang Bon to buy *catch* crops such as corn, chilli, cucumber, pumpkin sesame and so forth. For instance, before Mr. P could sell pumpkins at 5 baht per kilogram and 5-10 baht per kilogram for cucumber. The total selling price depended on the opportunity and harvest conditions. Sometimes, he could sell his *catch* crops about 5,000-6,000 baht, and sometimes, 10,000 baht in total per year.

Generally, the younger generation in Ban Mae Chang have a positive perspective on growing cash crops. Meanwhile, as Mr. P in Ban Mae Chang Bon, some of the aged villagers assert that they have never grown such a risky crop so far, nor plan to do so. The future of the village, however, will be handled by the new generation as long as they will stay with the parents. The youth in my research site, who are aged under thirty years old, have more Thai literacy and an educational background at least until grade 6 of primary education. Regardless of whether they have an educational background or not, the following perspective of a young villager with strong wishes for the rich harvest are shared widely among highland farmers regardless of their generation.

#### **Case: BMC-Middle (1) *The Invested to Grow Cabbage***

The 18-year-old male, named K, presently works in the family swidden with the parents and elder sisters and brother in law. In the 2002 rainy season, a neighbour inside the village invested in the family to grow cabbage for the second time. K was engaging in cabbage cultivation with his elder siblings. They invested 5,000 baht for cabbage to grow in their 1 *rai* of swidden field, but could not make a profit. They lost labour time (opportunity cost) but no money. K says that he would like to grow cabbage again if some investor offered the chance to him.

K finished his junior-high education in the village school in 2002. Since then, he has become an important source of labour for the family livelihood. He tells about his life and hopes;

“After I graduated from school, I had to help my parents to support my family members more than before. If possible, I would like to study more like my friend who is studying in Mae La Noi. But it is not feasible in my case, due to my family’s



status. Actually, I am fond of farming in the field, of each crop such as dry rice, wet rice, and cabbage. Among the farming, what I like the best is rice farming in both dry and wet field, because it is surely edible and we can grow other catch crops in the swidden field as well. If I have the chance to grow cabbage and other cash crops, I would like to try them. Now I cannot imagine where the future agriculture in this village is going, but strongly hope that our rice harvest is always rich enough to live forever.”

Meanwhile, emerging consumerism and economic desires are practically threatening the highlanders’ value of life and security of land tenure. Even though the customary laws underlying their belief system do not allow them to sell swidden land, economic incentives are easily coaxing the highland farmers to render their land by various clever tricks. For instance in 2001, some of the richer villagers in Ban Dong Luang sold their terraced fields and livestock as a donation offered by a monk.<sup>4</sup> As a result, the followers of the monk were swindled by the religious agent. The implications from this veiled incident show the highlanders vulnerable status both socio-economically and ideologically. Coupled with economic incentives, ideological control from outside religious authorities is also a contributing factor in changing their sense of value and security.

There was no victim of this incident in Ban Mae Chang, probably due to the difference in economic status. It is unavoidable in Ban Mae Chang, as well as Ban Dong Luang, that cash is necessary not only for surviving periods of low-rice productivity, but also for their simple desires for properties such as cars, motorcycles and radios, like the richer highlanders and the lowlanders. In 2002, over twice the number than usual of villagers of Ban Mae Chang grew cabbage in their dry rice field inside and outside the village by utilizing a Village Fund loan, by which some of them also bought motorcycles in instalments although their benefit from cabbage was only a little. It is just a difference of pace to change the agricultural system between Ban Mae Chang and Ban Dong Luang.

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4 In 2001, there was an incident of fraud by a monk, in which about 400 persons around Mae Sariang including many ethnic highland farmers around Mae Sariang lost a large sum of money. Some of the villagers in Ban Dong Luang also believed the monk and donated enormous amount of money. Some donated 100,000 baht, and another in Ban Dong Luang also gave 200,000 baht for the monk by selling their properties. Through my interview with Mr. Nao and Joa on January 20<sup>th</sup> 2003, I got this information.



The natural resources of forest, soil and water in Ban Mae Chang are actually in danger to be deteriorated, eventually.

## 5.2 Choices and Strategies of Highlander in Agriculture

In the process of agricultural decision-making, there are variegated conditions in which the highland farmers make decision and attempt to improve their life, in other words, to increase their benefits and utilities. However, it is more complicated than the farmers merely deciding to take certain options or not, as the motivation of farmers about why make their choices must also be considered. Cancian (1980:161-165) criticises that a distinction should be made between the economics of normative and descriptive; while anthropologists are usually interested in the descriptive analysis to understand what people do and why they do it, economists frequently lean towards normative analysis to determine what people ought to do. It is also argued that there is no distinction in normative approaches to the agricultural decision-making between *risk* and *uncertainty*, each of which must be adequately considered in the investigation of adaptive behaviour among the peasants.

In this regard, the notions of “risk preference” and “risk aversion,” as well as the measure implied with the “risk aversion coefficients,” are not exactly efficient ways of applying analysis due to obfuscate usage of the terms. At times, economists use them as expression of fundamental formal decision rules; but at other times, these concepts are used to indicate the personal character and mood of the investor (Boussard 1979:65, cited from Ortiz 1980:197). This criticism holds significant meaning for the investigation of the cases in the Pwo Karen community.

### 5.2.1 The Theory of “Real-life Choice” in Practice

Beyond the investigation of the impacts of cabbage cultivation on their environment and social life, how do the Pwo Karen regard these technological innovations in cash cropping, and decide to use them? How many choices do they have, or can they adopt? To what extent can they select in each choice? For instance, in the

case of cabbage cultivation, once they decided to make a profit from cabbage, it seems that the highland farmers had no way to avoid application of combinations of fertilizers. If they do not apply the 21-0-0, it is generally believed that the cabbages will be difficult to sell because they do not have a good round shape. It means the input of chemical fertilizer is indispensably included in the kit of cabbage cultivation as a vital element.

Why and how do the farmers decide to do try new choices? Why not? Gladwin (1980:67-71) provides the case of the decision to adopt fertilizer among the farmers in the *Altiplano* of Guatemala. Traditionally, the farmers in *Altiplano* apply bagged mixtures of nitrogen and phosphorus (20-20-0 or 16-20-0) on corn, after planting at the time of the first rains, and on wheat, at planting. One day, the national Institute of Agricultural Science and Technology (ICTA) recommended an additional application of nitrogen fertilizer or urea (46-0-0) 10 days before flowering for corn and 40 days after planting for wheat. Through interviews with farmers and agronomists in ICTA, it was an obvious fact that farmers could improve their yields if they changed the type of chemical fertilizer they applied. However, only a few farmers applied urea in addition to the first application of 20-20-0. According to the decision tree by Gladwin (1980:68-71), “the constraints of factors limiting adoption” will be assigned to the farmers’ decision-making. The one decision, for example “Try urea in addition to 20-20-0” must pass all constraints. There are several stages to be questioned by each constraint such as “supply,” “awareness knowledge,” “yield,” “gross returns,” “risk,” “labour of time,” “capital or credit,” and so forth depend on the situation (Gladwin 1980:70). Along the decision tree, according to the theory of “real-life choice,” the farmer proceeds to consider whether or not to try by checking the value, security, and possibility or availability for them. In this process, what can lead them to decide is “paths” to question their real situation, which is more important than others, even more than “gross returns” to promise the farmers great utility (Gladwin 1980:71). Based upon this approach in following subsections, I would like to analyse the cases of the research site and show how each of them make decision in each context.

### 5.2.2 Case Studies of Ban Mae Chang

For the Pwo Karen in Ban Mae Chang, what conditions allow them to start cabbage cultivation? It is possible to answer to this question that it is “for maximization of utility” in each condition of every class and individual farmer from a microeconomic perspective. However, the actual reasons and conditions are more than that, and those contexts should be taken into consideration when approaching the decision-making process of the highlanders. In this subsection, I will investigate the choices and strategies of each economic class in the research site by focusing on patterns of “land use,” “food security,” and “risk management” to cash cropping in the changing agricultural scheme.

The rich class in Ban Mae Chang consists of eight households of which five are serving as official workers (one official village headman, two of his assistants, and two sub-district administrative office, so-called *O.Bo.To.* workers in the village), in which two of them are the direct descendants of a traditional village headman. Among the rich, there is another case in addition to the aforementioned cases of the riches (Mr. A and B) which is those who have privileged accesses to external agents.

#### Case: BMC-Rich (3)

##### *Risk Management due to Privileged Access to Market and Authority*

Mr. C, another village official for six years, has been involved in cabbage cropping for over 10 years. He has been struggling with the repeated failure of cabbage cultivation for eight years. Although he lost labour time from cabbage, it was relatively helpful for him to receive support from a Hmong investor of Ban Pa Chi Mai, nearby Mae Ho, four times during their total cabbage farming. He uses two places for cabbage in Ban Mae Kanai. During the period of cabbage cropping in the rainy season, it is not enough for just him and his wife, so they have to hire more labour. In 2002, they hired about five labourers and paid them 3,000 baht in total. He paid the wage of 60 baht a day for one person inside the village. The family has five members. He describes his feelings about life after he started cabbage farming like this:

“Life has been better than before, although cabbage is not a stable crop. I believe the main reason for my failure in cabbage cultivation was due to the poor quality of seed. Rice productivity has increased because of fertilizer. I know that more and more fertilizer is required year by year, if I use the old land repeatedly. I still have debt every year. Even though I have debt by cabbage and others, I feel easy now; before I also made a living relying on the official loan, such as a previous Village Fund loan, and now, if I can gain profit by cabbage, I can return the debt at once.”

This is, however, as in his case, he receives the monthly salary from his official work, and therefore has access to external investment for his cash crop. Otherwise, he would be struggling in a desperate situation caused by heavy debts like other majorities.

The other two rich do not have any official status but made high profit from cabbage cultivation in 2002. One of them has efficiently utilized several factors to increase cash-income. What factors make this farmer ‘successful’ in cabbage cultivation is shown in the following case:

**Case: BMC-Rich (4)**

***Risk Management from Better Access to Market, Maximized Rice Security, and Labour Work***

Mr. D has grown cabbage for 7 years. At first, he was supported by an investor from Mae Ho. He has experienced failure twice and lost about 15,000 baht in one year. In the rainy season, he uses an area of 4-*rai*-field for cabbage in Ban Mae Kanai. Simultaneously, he uses a 2-*rai*-field for cabbage inside Ban Mae Chang, and grows dry rice in another field inside. Moreover, he owns terrace to grow wet rice every year. He took out a 20,000 baht-loan from Village Fund to invest in cabbage cultivation, and fortunately, gained a profit of 18,000 baht from the gross sales in the rainy season of 2002. He supports his wife and two children. He explains his swidden-management as follows:

“Rice productivity is better than before because I am careful to rotate my fields with cabbage and dry rice year by year, including the fallow period as well. The fertilizer is moderately effective so far. The soil in Ban Mae Kanai is not good for farming, but is accessible to the road and good for cabbage transportation. The soil condition is better and richer in Ban Mae Chang.”

It is important for the Pwo Karen farmers to have chance to get investors to grow cabbage without their capital at the beginning. Besides, the location for growing cabbage is another vital point for marketing. These requisitions allow them to increase their profit in cabbage cultivation.

There is only one Christian family in Ban Mae Chang, where animistic activity mixed with Buddhism prevails. The Christian man is Mr. E, who serves as one of the officials in the village and who has a wife and two sons. In his case, more various strategic attitudes to life can be seen.

### Case: BMC-Rich (5)

#### *Strategies by Conversion and More Access to Outside World*

About a decade ago, he used to engage in cabbage farming as a labourer for Hmong people near Ban Dong. He owns 4 *rai* in Ban Mae Kanai nearby the road, and has grown cabbage for 6 years with investment by Hmong people and a Ban Huai Pla Kang villager, each for three years. In the rainy season of 2002, he did not grow cabbage because he had accumulated debt, so instead he lent his field there to his neighbour. One of his main debts recently is from motorcycle he bought for 40,000 baht by instalment. He borrowed 20,000 baht from the Village Fund intending to invest it in cabbage. He presently uses one kind of dry rice, which is a yellow coloured species. The rice productivity of his family benefits from fertilizer, and he is satisfied with it as it is than before. Why his family converted to Christianity, he explains:

“My family and I have been Christian for three years. I cannot endure the animistic practice, because it costs too much in every ceremony. We regularly have to pay around 2,000 baht per year for the religious activities. If we were punished for some wrongdoing, we must pay a larger fine than that. For instance, in the case of premarital pregnancy, the female has to pay a 3,000 baht fine. In the case of immorality and the pregnancy of a female who is not the formal wife, the male will be fined 5,000 baht. Such observance cost so much, I cannot follow. Besides, one of my sons has an atopic disease so that I have to take him to the hospital in Mae Sariang every month. It costs 180 baht for a medical examination each time, and another 200 baht to make the trip, including transportation fee and meals in town.”

Mr. E seems to be an exceptionally progressive person regarding his adaptations to their circumstances in the village. Gaining access to the outside world much more than other villagers, because of the official work, cash cropping, and his new religion, is his survival strategy for his family.

If they had an investor offering everything for cash cropping, some of the highland farmers would be willing to utilize the opportunity. If the “utility decision model” microeconomic approach can be used here, such as Mr. C, D and E, those who leap for cash cropping are regarded as actors who are efficient rational farmers for selecting the option with the highest utility, given a certain set of conditions in the economic environment (Ortiz 1980:196). Even though those farmers sometimes experience a loss of opportunity through failure of the cabbage, the capital impact on their life is little since they do not need to pay money until they can get benefit. As long as the investors in cabbage cultivation contact them, and if the labour for rice can be secured, many farmers would continuously grow it.



However, this is not only the case for those who regularly engage in cabbage cultivation. There are 10 households that can be classified as well-to-do, gaining an annual cash income from cabbage cultivation and labour work. Many of them have been in serial debt by cabbage, however, they steadily stick to cabbage cultivation to generate as much cash as possible. All of them supplement their cash income with wage labour. The reasons why they have to continue to grow cabbage are shown in the following cases:

**Case: BMC-Well-to-do (1)**

***Food-economic Security by Maximum Utilization of Land and by Labour Work***

Mr. F started cabbage cultivation six years ago. In the first year only, some Hmong people in Mae Ho invested in his cabbage cultivation. Since the second year, he has invested by himself. He now has a debt of over 10,000 baht. In his six times of cabbage farming, only once could he make profit. He and his family members use terraced fields as well as swidden every year, so they have to help each other in a more efficient manner. Cabbage farming is Mr. F's job. The wife and the elder daughter of Mr. F are charged with taking care of rice farming in both swiddens and terraces. The father helps the rice farming in the tough jobs for females such as ploughing in the terrace. Meanwhile, the mother and daughter weed the cabbage field as well. The work during rainy season has increased for the each family member. However, the 21-year-old married daughter of Mr. F said that she feels so happy that she can help her father and mother by actively engaging in rice farming in both the swidden and terrace.

Mr. F has another younger daughter who is studying in town outside the village for her senior-high-education (*Matthayom* 4-6). The village schoolteachers are proud that they sent their two students, in the first group, to outside schools. The school principal said "now we are encouraging the villagers to send their children to outside schools to gain a higher quality of education." On the one hand, listening to the school principal's proud narrative beside him, Mr. F said that "in fact, it is difficult for us to do this with only resources from our household economy. I am struggling with it." As the father of a pioneering student of the village, he is proud of allowing his daughter to study in town. However, for the villager as swiddener, to send their children to an outside school in town is not only a matter of higher education costs, but also they have to support their children for other extra costs in town life. Moreover, they have to cope with the lack of labour when they decide to let their children study outside. It is so burdensome for the villagers' economy that the father's voice shows the actual difficulty of their educational issue as related with their livelihood.

**Case: BMC-Well-to-do (2)**

***"Cabbage is Dispensable for life"***

Mr. G, is one of the farmers who has grown cabbage for five years. The first year,

the Ban Dong Luang villager invested in his activities. He concurrently grows dry rice for five family members. However, he is always concerned about his wife's health condition while they are working in the field because she is not strong. Mr. G states that:

“Whether time and labour are enough or not, I have to cope with the circumstances of cabbage cultivation to survive. Even though I was burdened with a heavy debt from cabbage, I have to support my family. Our life has barely benefited from cabbage so far. I also want to try other cash crops if I have the chance. But it is actually impossible for me to do it because my wife is weak and I have to work with less labour force. Cabbage is vital for my household economy all the time.”

Meanwhile, when the Pwo Karen make the decision to embark on cabbage cultivation with their own capital, they must face a number of constraints which suggest to them benefit, risk, uncertainty, expectation, and anxiety. There is a household that already abandoned dry rice farming in swidden and tuned to grow only cabbage. They have never had the chance to get investors to help them grow cabbage, however, they decided to embark on it despite the uncertainty.

### **Case: BMC-Well-to-do (3)**

#### ***Survival Strategy: Convert to Mono-cultural Cabbage Cultivation and Labour Work***

Mr. H, was facing more severe conditions than before. He has already given up dry rice farming since two years ago, because his wife who was suffering from rheumatism could not work in the field with him. Five years ago, he borrowed 10,000 baht from the government loan to attempt embarking on cabbage cultivation. Unfortunately he failed and lost almost everything. He has not returned the debt yet. Rice for daily consumption in his family is purchased with cash from cabbage farming. If he cannot make a profit from cabbage, he only resorts to wage labour work to get cash. Mr. H grows cabbage only by himself. He cannot afford to hire labour in his cabbage field under such an unstable cultivation circumstances. The last strategy for them to survive – only staking on cabbage – is a highly risky decision, however, there is no other way to choose in the present situation of the family.

Cooperative work is indispensable for rice farming in swidden society to support the villagers' life. As the above cases (Mr. G and H show), it is crucial for swidden farming and for their livelihood if they cannot work in such a way to help each other with their spouses. The reason why Mr. H adopted such a risky choice to stake his life in cabbage cultivation, moreover, why not quit despite burdened debt, are due to his circumstances; his wife is too weak to grow dry rice together so he cannot support two small kids, his

wife and himself. It is a fatal survival strategy based on his situation more so than a motivation to make profit.

Generally, those in the middle class show hesitation towards cabbage cultivation for several reasons. The 16 households are regarded as the middle class. Only three households from this class grew cabbage in 2002, and others gained cash mainly from labour work. In this class, there is one head of the house, who is a handicapped man, and diligently devoted to dry rice farming with raising some cattle to support four family members. Although he does not own a terraced field, he gained enough dry rice (120 *thang*) from 5 *rai* for the family in 2002. Others who could get enough rice productivity are all using their terraced fields to supplement their dry rice. Among those middle-class households, there is one family that seems to fear going into debt:

**Case: BMC-Middle (1)**

***Adhere to Food Security and Risk Management by Labour Work:***

***The Conservative Family and Cash-Cropping beyond Bitter Experience***

Although he never speaks of it, the villagers know his past glory days. Mr. I used to be recognized as one of the richest highlanders around the region. When he was rich, Mr. I was engaged in the timber-business with his friend, using 3-4 elephants, and owned valuable assets such as a number of livestock, buffalo and cattle. His luck, however, came to an end, and he lost everything after that. Around ten years ago, Mr. I attempted to make profit from cabbage, and got into debt again. Since then, Mr I's family has gradually evacuated their swidden field succeeded from their parents. However, due to the heavy floods during the rainy season of 2002, their wet rice field could not be available for farming in 2003, so they are planning to use 2 *rai* of dry rice field again in the next season. Mr. I talks about his bitter experience of cash crop and present agriculture:

“The first and last time for me to grow cabbage so far, was about ten years ago. I invested it by myself, and failed. I really realized that it is too risky to grow cabbage at that time. Even if I had a budget, I am not sure if I will do it or not. Anyway, I do not want to lose my money anymore. I have not used dry rice field for 5 years, I just grow wet rice in my 6-*rai*-terrace with my wife, because we do not have enough labour for dry rice farming. Our three children are still too young to help us. Only rice, is reliable all the time, and also for the future. I cannot trust other cash crops.”

In the application season for Village Fund 2002, Mr. I applied to borrow 20,000 baht by attempting to make a profit in cabbage cultivation at the then time. After he

received the loan, however, he thought that he might be losing money again from cabbage, and decided to return the money, including the 3% interest, to the government as soon as possible. Mr. I tells now he returned the money as follows:

“I asked my neighbour to lend me money for repayment of the Village Fund. I borrowed 10,000 baht from him with 3% interest. This is how I could return the loan to the government. But, in order to return to my neighbour, I have to borrow the money again from the Village Fund 2003. Now I am waiting for the next application opportunity.”

His feelings about life presently and his expectations and perspectives on future farming for his family, he states like this:

“My wife and I go to work in Mae Sariang as seasonal labourers. Sometimes, we can gain 20,000 baht between us. However, I am fed up with labour outside. Working in the fields inside the village is the best and most comfortable.

Our eldest 13-year-old son does not like to go to school, he prefers to help us in the field. Because he knows that we his parents are really struggling with making a living.

In this village, there are still many who never know the outside world. My wife and I want our children to stay inside the village with us. The future of our village will be the same as like now, I hope.”

In the farming season 2003, the two sons aged fourteen and twelve of Mr. I can help to grow dry rice in the swidden field. The wife of Mr. I insists “we will not grow cabbage in the next season as well. It is the best and most reliable to grow rice.”

There are still many villagers, who do not try, nor believe cash cropping, or adhere to their traditional swidden farming. Among my informants, Mr. P in Ban Mae Chang Bon is the one who is a so-called “risk averter,” who has never intended to grow cash crops but actually made great profit by his catch-crops in swidden land sometimes. Mr. I in Ban Mae Chang is surely a sort of “risk averter” who insists that “traditional life and rice farming are the best” with his wife in one voice. He used to try various kinds of business before he became a risk averter. In his case, his bitter experience of serial failures from his attempts made him and his family conservative towards cash cropping. However, they are still concurrently tempted by the incentives of cash crops as well as hesitant because his negative attitude to the new choices. His attitude will be possible to turn to become “risk preference” in a certain setting and situation.

Many villagers do not grow cabbage for various reasons, not necessarily due to



“risk aversion.” Among the villagers who have not grown cabbage, there are several attitudes towards cabbage cultivation: those who are not growing cabbage, but; (1) engaging as labour with the aim of getting the chance to grow them; (2) quitting or resting because of heavy debt; (3) quitting or resting because of labour insufficiency; (4) never, because no need and no interest; and (5) never, because impossible due to the unprivileged situations, such as widowed, fatherless, and disabled or disordered. Seventeen out of all households in Ban Mae Chang can be ranked as poor class. In this class, they do not have access to cabbage cultivation in general, except from external support such as investment and Village Fund support them to do it. Only one family attempted to grow cabbage by utilizing Village Fund 2002, and totally failed, and got only debt.

**Case: BMC-Poor (4)**

***Risk Management from Labour Work:***

***Those Who Failed in Cabbage Cultivation by Using the Village Fund 2002***

In the poor group of Ban Mae Chang, there is only one household that grew cabbage in the rainy season of 2002. Mr. O, a 29-year-old family headman, borrowed 20,000 baht from the Village Fund 2002, and attempted to make a profit by using 8,000 baht to grow 4 *rai* of cabbage. Investing a high loan for cabbage in his first trial, he expected 10,000 kg of yield. Before embarking on cabbage cultivation, Mr. O estimated that; if the market price of cabbage would be 2 Baht per kilogram during the season, he could cover the cost; if 3 Baht per kilogram, his profit would be 10,000 baht to be able to return the loan and gain benefit for his family as well.

Mr. O’s family started to grow cabbage early in the season, at the beginning of July 2002, and transplanted the cabbage plants from the nursery to 4 *rai* of field in the middle of August. Mr. O prepared for cabbage forwarding by make a reservation with a neighbouring car owner for transportation. Two months later, around the latter half of October, Mr. O and his wife harvested all the cabbage, and waited for the time to convey their cabbage to Mae Ho. The timing was unfortunate. It was raining heavily for about two weeks in the upper area of northern Thailand from the middle to the end of October 2002. The mountain region of Karen in Mae Sariang was also seriously affected by the weather. The car could not come up to Mr. O’s cabbage field so he could not sell his cabbage on time.

“Before I really wanted to grow cabbage if I had the chance and budget, and if I could secure our labour for dry rice farming. Cabbage is so easy to grow because it only takes three months. Last year (2002) I had the opportunity to get a Village Fund loan and, also the offer to work for the local NGO activity in our village, so I decided to embark on cabbage cultivation finally. I was very unlucky with cabbage, however.



After everything finished with the unsold pile of cabbage, we ate cabbage everyday, in every meal. We have tried almost all kind of cabbage-cooking already. I am so fed up with cabbage! I do not want to grow cabbage anymore. Next season, if I have the chance, I would like to try red beans for sale as suggested by the local NGO.”

Mr. O lost 8,000 baht from cabbage and had to return the rest of the loan with interest to the Village Fund. In his case in this time, however, he could just cover his debt because he got the opportunity to work with the local NGO in his village for a while.

If the households do not have male labour in highland swidden society, how do they cope with such a disadvantageous status? One of the cases of the fatherless consists of only three females, the mother and two daughters. Another daughter of the fatherless family is recently married and lives nearby the parental house. The new house is the one that grew cabbage and lost to be in heavy debt.

#### **Case: BMCB-Poor (1)**

##### ***Risk Management by Only Limited Labour Work:***

##### ***The Fatherless Household***

The fatherless family consists of the mother and two daughters. Ten years ago the father died. Mrs. U, the widow and the mother of the family, has another daughter who is the eldest one and married and residing in the neighbourhood. This family has never grown cabbage nor borrowed money from official loans such as the Village Fund since they cannot return it. By only two female, Mrs. U and the younger 15-year-old daughter, they gained 5,000 baht throughout 2002. The elder daughter of Mrs. U is not strong enough to work as labour.

The work in cabbage field for which Mrs. U and her daughter do is weeding, planting or harvesting cabbage. The rice yield in 2002 of the family was approximately 60 *thang*, which was not enough for three family members, so that they bought 20 *thang* of rice more, which cost about 4,000 baht.

The husband of the eldest daughter, the son in law of Mrs. U, is the sole male family member to support Mrs. U's household. The youngest daughter of Mrs. U wants to grow cabbage to make profit. However, it is never feasible for them since they are a fatherless household, which is always regarded as low capacity by the cash-crop investors.

The eldest daughter of Mrs. U lives with her husband and a newborn baby nearby her mother's house. This new family borrowed 20,000 baht from the Village Fund 2002 for cabbage cultivation and their daily rice. The yield of dry rice 2002 in this family was 50 *thang*, which was partially shared with Mrs. U's house, and they bought rice for them 15 *thang* more. The new family invested 6,000 baht for cabbage in the rainy season 2002. It was the first time for them to grow cabbage by themselves, and lost all investment costs. They are planning to grow cabbage in the same field as 2002, by utilizing the Village Fund 2003.

The 15-year-old daughter in this family states that she would like to grow cabbage for higher income if she could. However, they have neither the chance nor ability to grow cash crops in practice since they always lack labour and therefore the investors regard them as incapable of engaging in cabbage cultivation.

Through the above-delineated cases of adaptation of each class, I found that “risk management” manners for both rice farming and cabbage cultivation generally resorted to wage labour among the villagers. Even for the villagers who can secure a certain amount of income in rich class of Ban Mae Chang, wage labour is indispensable managing their economic security. It is almost unnecessary to mention that the opportunity for wage labour is vital for the lower economic class under the well-to-do to the poor.

To maximize their benefit and utility for each household, it is sure that they are not only struggling with agricultural changes for survival inside and outside the village, but also actively engaging in and utilizing the opportunities provided by the market system. There are many cases that cannot be simply classified as “risk preference” and “risk aversion” in real local life, nor can they be divided into “adherence to traditional farming” and “transformation to modernized agriculture” in swidden society in which the highlanders are dynamically adjusting to the changes.

### **5.2.3 Case Studies of Ban Dong Luang**

As I mentioned at the beginning of this chapter, the economic activity in Ban Dong Luang at the present ranges from cabbage cultivation to some illegal trading, so I focus on only the villagers’ cash income of 2002 from agricultural activities, wages from labour in cabbage fields and its market as the indicators in this study.

According to these indicators, we can classify the population into four agricultural economic classes; the rich of nine, the well-to-do of 17, the middle of 16, and the poor of 21 households. The rich, the well-to-do, and the middle, which consist of 42 households out of 63 households of the total in Ban Dong Luang, grew cabbage in rainy season 2002.

Most of them engage in cabbage cultivation regularly. Especially, the households in the rich group are regular cabbage farmers who do not need to make a living by wage labour, and hire wage labour for cabbage cultivation from inside and outside the village. The rest of the 21 households, which are classified as the poor, did not grow cabbage in the same period of 2002. This group tends to fail in cabbage cultivation so that it is difficult for them to engage in it every year. Meanwhile, this poor economic group benefits from the labour opportunity offered by the richer class.

In this subsection, I would like to apply the two-group classification of cash-income in Ban Dong Luang as aforementioned in CHAPTER III (see Table 3.1): one is “upper-income class” that can regularly grow cabbage to make profit; another is “lower-income class” in debt that cannot engage in cabbage cultivation every year.

#### **The Upper-income Class: The First or Earlier Group to Embark on Cabbage Cultivation**

In the upper-income class among the villagers, a 46-year-old man, who performs official work is included. Mr. B' has performed official duties for 16 years, since he was thirty years old. Mr. B' has engaged in cabbage cultivation for 11 years. His annual revenue by cabbage cultivation in 2002 was 45,000 baht. He owns three places to farm cabbage in 5 *rai* and dry rice in 4 *rai*, and another place was fallowed in 2002. Although he does not hold terraced fields to grow wet rice, his dry rice yield was 130 *thang* in 2002, which was enough for his three family members. The dry rice productivity of Mr. B' is thanks to the chemical fertilizer for cabbage, he realizes. About the transformation of their production system for these three decades in Ban Dong Luang, Mr. B' describes his motivation to embark on cabbage as follows;

About fourteen years ago, Hmong people came to grow cabbage in this region, around Ban Dong Luang. The cabbage farmers of Hmong groups had money, cars, and seemed to be quite rich, compared with we, Pwo Karen around there at that time. At the beginning when we started to grow cabbage, we just followed the Hmong people's teaching, and relied on their help and investment, and we shared the profit half and half with them. For example, we had to borrow the car for forwarding cabbage from Hmong villagers before. We have learned how to grow and sell cabbage in market from Hmong people. Gradually we have made a profit by

ourselves to buy a car, and developed our own method of cabbage cultivation.

The first or earlier group to embark of cabbage cultivation in Ban Dong Luang share the above-mentioned motivation and process as a common experience. The first group, which started on cabbage in the region during the period from the late 1980s to the beginning of the 1990s, generally have experienced big profits as well as several losses. Through both happy and bitter experiences of cabbage cultivation under the unstable market system, this group has learned to manage cabbage cultivation, and adapted themselves well to gain benefit to invest cabbage year by year. Moreover, at the beginning, there were more investors from Mae Ho or other richer farmers outside the village than later. During the beginning of cabbage era in the region, the earlier group who had access to those investors could utilize the opportunities to be successful and to make a large profit as well. During the past decades, those large cabbage farmers have become 'middle agents' and make a profit by investing in adjacent Pwo Karen farmers including in Ban Mae Chang (*e.g.* Case: BMC-Well-to-do (2), Mr. G).

#### **The Lower-income Class: The Later Group to Start Grow Cabbage within This Decade**

Twenty-one households in Ban Dong Luang can be regarded as the lower-income class who were struggling with heavy debt in the vicious circle. However, although I classified another 16 households as the middle class since they got involved in cash trading by cabbage cultivation, many of them in the economic class are possibly regarded as the poorer in the village. The annual mean cash income from cabbage in the middle class is just over 5,000 baht and under 10,000 baht in the rainy season 2002. Many of them are in danger of getting debt so that they possibly do not have the budget to grow cabbage in next season. There are two main types who grow cabbage among the poorer villagers: one grow cabbage every two years; the other is not able to grow it by themselves but are involved as labourers. Such villagers who do not or cannot grow cabbage are generally struggling to earn cash in order to supplement their rice shortage from the smaller arable fields as well.



### **Case: BDL-Poor (3) & (4) *Cabbage Cultivation as Labour***

The household of Mrs. E' contains four family members, and uses about 6 *rai* for each plot, of which they have three. They grow only dry rice in their three plots every year. Their dry rice harvest of 2002 is 200 *thang*, which is enough to support all family members. They have never grown cabbage, but have depended on it as labour since cabbage cultivation first started in the village. Mrs. E's daughter, in her early twenties said that they are longing to grow cabbage, but they do not have money to invest. This desire for cabbage is shared among the poor class in Ban Dong Luang who have never had the chance to grow cabbage so far.

Mr. F' has been married to his wife for around five years. The household of Mr. F' consists of himself, his wife and two infants. They use two plots, each of which is 4 *rai*, to grow dry rice. The 2002 rice yield was only 50 *thang*, which was too small to meet their daily consumption needs, and was supplemented another 20 *thang* by the end of 2002 by purchase. Mr. F' and his wife have engaged in cabbage as labourers since they got married. Throughout the year of 2002, they got 3,000 baht by labouring in cabbage fields both inside and outside Ban Dong Luang. Mr. F' did not use the loan of Village Fund 2002. Mr. F' and his wife have been searching for the chance to embark on cabbage cultivation for themselves. The wife of Mr. F' states her strong desire to cabbage cultivation.

We have no money to start cabbage cultivation like other neighbouring houses. If we had, absolutely we would. I know how cabbage is risky, we might lose money and go into debt, which I also worry about. But we really need to get cash income. The wage labour in the cabbage fields is 50 baht per day in the case of inside the village, Ban Dong Luang.

### **Case: BDL-Poor (5) *The Fatherless Family***

Mrs. G' has had to raise her three children by herself since her husband died three years ago. She uses 3 *rai* per year for only dry rice, and other two plots are fallowed. The rice harvest 2002 was 100 *thang* from 3 *rai*, which was supplemented another 10 *thang* of rice by purchase at the end of the year. She does not grow cabbage. Even with dry rice, she is coping with farming basically, only by her self. In order to make a living for her three little children, she started a grocery shop inside her house. At the same time, she raised 10 chickens in her garden. Under such conditions, it was impossible for her to grow cash crops by herself, and she said;

In the future, if I had the money to invest in cabbage, I would not. I am too busy to engage in it. It was easier to grow rice when my husband was alive. It is so tough to farm with only one labourer in dry rice field. Now I have to manage everything by myself for living.

## **5.3 Expectations of the Future**



### 5.3.1 Agriculture Issues under the Market System

The villagers of Ban Dong Luang are more actively connected to the market economy through cabbage cultivation than those of Ban Mae Chang. In this current production system, what are the problems caused by this agricultural transformation? The official village headman in Ban Dong Luang explains the context of their agriculture and environmental concerns for these four decades in the following order;

- 1) excessive population growth in the village,
- 2) reduction of forest due to expanding villagers' use,
- 3) limits of the rotational fallow farming system,
- 4) the change from traditional manner to commercialized farming mixed with cabbage,
- 5) soil erosion from intensive chemical input,
- 6) water shortage from declining forest resource, and
- 7) decrease of wild animals and other non-timber forest product due to less forest.

The above conditions have strained the life and agriculture in Ban Dong Luang worse and worse. Under this distressed circumstance, as in any other area around the country, some of the villagers have been in danger of becoming involved in illegal activities. The official village headman expresses fear for future life in Ban Dong Luang, by stating that, within this five to ten years, all their children will be required to go outside as labourers to work to make a living since the soil has already been eroded and the sustainable population has been exceeded inside the village. He adds that their agriculture should change to multi-cropping as soon as possible. In any case, they need to make connections to other markets for cash crops in Chiang Mai at first, he says.

The Ban Dong Luang villagers have stuck exclusively to cabbage for over a decade. The major reasons are that they know and have access to only the market for cabbage at Mae Ho, and the Hmong cabbage investors or lowlanders come to pick up their crops under the contracts. Access to the market in town is still not easy for the Pwo

Karen who generally cannot afford to have a car. About five years ago, at the end of the 1990s, some of the villagers in Ban Dong Luang grew several kinds of vegetable (corn, potato, sweet potato and so forth) as cash crops for their first trial. The productivity was desirable and they thought that would be new cash crops for them, but they have not grown them again. Although it is not clear whether the farmers in Ban Dong Luang at that time were supported or received invested from outsiders or not, they say that the new options have not been feasible for them, since they have no certain access to the market for other crops.

The villagers in Ban Mae Chang have followed the practice of cabbage cultivation and benefited from labour work in cabbage fields in Ban Dong Luang. On the other hand, they regard the situation of Ban Dong Luang as a negative precedent for agriculture and natural resource management in Ban Mae Chang. However it is indispensable for the cabbage farmers in Ban Mae Chang to put chemical fertilizer on their swidden land and the soil has also been in danger of erosion, even though the fertilizers seem to be still beneficial for their dry rice output. For future production systems in the village, the official village headman in Ban Mae Chang says that the new generation cannot sustain their life by farming only inside the village and must go to work outside because of soil erosion, the same perspective is shared with the village leader of Ban Dong Luang as aforementioned.

### **Case: BMCB-Middle (3) *New Generation's Perspective***

Mr. T is a 25-year-old man who has a wife and a male infant. He lived in town for two years as a soldier conscripted by the government. He once grew cabbage five years ago, investing 20,000 baht by himself. At the same time, he grew potatoes, just as the first trial, introduced by his friend in Ban Huai Pla Kang. Both cash crops resulted in failure so that he has not grown those cash crops for these five years. He did not borrow money from the Village Fund 2002 because he does not like to be in debt to such a kind of loan. However, he is planning to grow cabbage in next rainy season 2003 although he has not decided yet the amount and place to plant. Mr. T grows approximately 3 *rai* of dry rice in a year. The dry rice yield of 2002 was 40 *thang*, which could not support five family members, including his parents in law.

In the future, when his baby becomes around 10-year-old, Mr. T wants to move to Chiang Mai since he knows urban life and is fed up with hill farming on the mountain

under the restricted conditions.

### 5.3.2 Possible Alternatives and Options for the Pwo Karen

In Ban Mae Chang, there are some villagers presently growing coffee. After the Tribal Development and Welfare Unit was established in Ban Mae Chang in 1964, coffee cropping was one of the promotions by the agricultural development program of the office (Kwanchewan 1988:102-103). Unfortunately, the program has not been well diffused among the Pwo Karen in Ban Mae Chang since the beginning, so that a few different villagers grow coffee, one after another at intervals. Yet, since the end of 1990s, coffee planting has gradually attracted the attention of some villagers' in Ban Mae Chang. After bitter failure from cabbage cultivation, many farmers in Ban Mae Chang lost all interest in cabbage cultivation. In fact, they have had only one available cabbage market, so that some of them still need to rely on it. However, in parallel with engaging in cabbage, some of them have started to look for other choices. Coffee, which did not suit the Pwo Karen village before, has been regarded as one of the possible new options, which might be better than cabbage for them.

There is one farmer, Mr. W, who has grown coffee in his terraced field since the end of the 1990s. Mr. W is the sole blacksmith in Ban Mae Chang, and inherited his terraced field of 5 *rai*, which is said that his forefathers got about 50-60 years ago. By repairing the farming tools for the villagers, he usually gets 100-200 baht per year. His rice sufficiency was enough in 2002 (total of 150 *thang*; 50 *thang* from swidden, 100 *thang* from terrace) for five family members. Mr. W and his wife work in Mae Sariang, as labourer for cash crops such as soybeans, at a wage of 100 baht for male and 80 baht for female per day. They generally work in this way for about one month during the dry season. They consistently report an annual wage labour cash income of around 4,000 baht (surveyed in December 2002). In working so, Mr. W has grown 30-40 trees of coffee in their wet rice field. He says the motivation for it is because he got the connection to the coffee market at Mae Ho. They have never grown cabbage, although they have engaged in cabbage cultivation as wage labourers, since they have no time to grow it. If they had time, they also want to try, however, the true idea of them seems to

be of “risk aversion,” according to Mr. W’s other answer that “we do not want to go into debt from cabbage (interviewed in January 2003).” He never uses chemical fertilizer in either his swidden or terrace land. Mr. W has adapted himself to the changing circumstances in such a manner as to maintain traditional farming and wisdom of soil management as well as efforts to try feasible choices for their real life situation.

According to the Skaw Karen farmer working at the cabbage trading point in Mae Ho, the Co-op (*sahàkoon*: a cooperative organization) at Mae Ho has purchased coffee from the villagers nearby, and the market to which Mr. W refers is the same place. Although it cannot be generalized here that since the market might be set in some special context, the price in 2002 is 7-8 baht per kilogram, better than cabbage which is at most 3-4 baht per kilogram in the same period (interviewed on January 26<sup>th</sup> 2003 at Mae Ho). This context of coffee market at Mae Ho apart, in June 2002, a local NGO launched coffee planting by collaboration work with the Pwo Karen, who are keen to trying, in Ban Mae Chang. Through private conversations with the villagers before, the NGO found out about the agricultural constraints and flaws of cabbage cultivation in Ban Mae Chang. The NGO group held serial meetings<sup>5</sup> with the villagers to offer the project of coffee planting as another option for the villagers. The objectives regarding alternative agricultural methods for the future farming in Ban Mae Chang were presented by the NGO, and discussed with the villagers. After agreement of the project between the villagers, coffee was planted by the villagers as the first trial on approximately 3 *rai* which used to be the official area for the Tribal Development and Welfare Unit until the 1980s. The applicant villagers to plant coffee in the area were given some coffee trees for their use. The villagers and the local NGO are now in the process of observing the condition of coffee. The evaluation by them will come a few years later.

Many negative experiences or failures of cash crops among the highland villagers have been reported so far. Coffee is one, due to over supply in the market. However, I will not discuss the efficiency and results of coffee plantation in Ban Mae Chang here, but only the context and process of the farmers adoption to their options. Cabbage

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<sup>5</sup> The first meeting in Ban Mae Chang was conducted by the local NGO on the evening of June 8<sup>th</sup> 2002

cultivation has accompanied environmental concerns among the Pwo Karen. Through the reflection of their experience in cabbage cultivation, the Pwo Karen have searched for different ways for their farming under the constraints. The objectives of the project offered by the NGO was almost coincident with the concerns among the Pwo Karen towards future agriculture. Thus the majority of them have just started to try it as one of the *options*.

From the perspective of the local NGO, why was coffee selected? Since it is obvious that many villagers have been tackling heavy debts from fluctuating market prices and environmental degradation from cabbage cultivation, their agricultural behaviour should be improved or changed from dependence on chemical to organic manner. Coffee planting in Ban Mae Chang intends not to use chemical but organic fertilizer made of dung from their livestock. It is also holding another shadow objective to help the Pwo Karen to revolve back to their traditional virtue of soil management, and appreciate their practices by mixing the relevant and sustainable methods together (interview with the local NGO in June 2002). The Pwo Karen accepted this offer by the NGO as a good option, with judgement that it would be not only helpful, but also feasible for them under present conditions. By utilizing the experience of the NGO through previous activities in other ethnic highlanders' villages such as Lahu and Lisu in Pang Ma Pha district, which the Pwo Karen in Mae Sariang hardly have contact to, the villagers of Ban Mae Chang have learned about other experiences of cash crops of the other highland minority groups. All of the agricultural development projects between the Pwo Karen and the local NGO have just started from the renewal of coffee planting.

#### 5.4 Summary

Why do or don't they grow cabbage? Why did they embark or not embark on it? How much discretion in the new methods of cash cropping under the market system do they have, or not have? What do they expect for their future farming in highland, or not? This chapter focused on an analysis of these most central issues. Through an

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when I was working in my field survey in the village.



investigation of the decision-making processes behind cabbage cultivation by the Pwo Karen villagers, a number of attitudes can be observed. These differ not only between the class of the richer and poorer, but also within the level of each economic class.

Before the examination of cases, I focus on the effect and impact of cabbage cultivation in the research site under the framework of “risk management,” in which environmental, socio-economical, and ideological changes among the highland Pwo Karen are entailed according to the changing production scheme. The Pwo Karen’s criteria for the changing circumstances were discussed in the following points; (1) introduction of new technology in highland farming; (2) impact of agricultural technology; (3) changes in values and economic security. In the above context, I attempted to approach to the Pwo Karen farmers’ decision-making by applying the analysis of “real-life choice” theory by Gladwin (1980).

What is obvious, through the investigation of adaptation by each classis, that the upper income class villagers in the Pwo Karen community have more access to the market and the means of risk-management. These conditions enable them to envisage cabbage cultivation as a more investment-oriented object, while the poorer are suffering from debt in a vicious circle.

Through the experience during the past decade in cabbage cultivation, the perspective of the Pwo Karen to the natural environment as well as their subsistence has also been changing. Their current livelihood is restricted by market issues and environmental concerns, and they tend to view their future life as pessimistic. On the other hand, they have strongly insisted in their practices regarding both production and knowledge system in practice. According to the previous study, the project for cash crops of cabbage and coffee initiated by the governmental office in Ban Mae Chang was not successful before. The Pwo Karen, however, have adopted cabbage as introduced by the Hmong people in the 1980s, and also have just restarted to plant coffee based on the offer of a local NGO in this new millennium. Their attitude towards cash cropping may be regarded as out-of-date or insufficient in terms of economical and political relevance. This tendency of decision-making by the Pwo Karen, however, came from their empirical

criteria and creative perspective towards future agriculture in order to improve their present situation.



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