

SOCIAL AND CULTURAL IMPACTS ON FOOD

SECURITY OF THE MUONG

**(Field study in Chien Village, Nam Son Commune, Tan Lac District,
Hoa Binh Province)**

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1. Background

Hoa Binh province has 10 districts and provincial towns and 214 communes, wards and district towns. In this region, there are 64 upland communes within the districts of Da Bac, Lac Son, Mai Chau and Tan Lac. The total natural area of the province is 466,252.86 ha, of which 66,758.92 ha (14.32%) are agricultural land. There are 5 ethnic groups that populate this province and mainly thrive on farming for their livelihood: Kinh (Viet), Muong, Thai, Tay, Dzao and Hmong... Since the Vietnamese government has embarked on “Doi Moi” (renovation), the mountainous rural areas of Hoa Binh province have experienced many changes. Infrastructure has improved and crop yields have increased due to the application of scientific and technological advances in agricultural production. The problem of food shortage essentially has been alleviated in lowland districts. However, due to lack of resources for agricultural production such as land, manpower and capital, food shortages remain in many upland households generally from one to three months. In some cases, it can last up to four or five months.

To ensure food security, each community has developed its own coping measures. The central focus of this paper is on the impact of social and cultural factors on food security of the Muong ethnic minority group in Chien Village, Nam Son commune, Tan Lac district, Hoa Binh province.

The issue of food security of ethnic minorities, particularly among the Muong, has not yet been studied in-depth. However, some research studies have already dealt with the livelihood of the Muong, mainly regarding income-generating activities in the traditional economy. The Muong are an ethnic minority group that chiefly lives on agriculture in which rice is the main food crop. Several studies point out that the economic life of the Muong communities is dependent on natural conditions, such as land, weather, water sources and forests (Nguyen Ngoc Thanh, 1988; Nguyen Ngoc Thanh & Nguyen Thi Thanh Nga, 2003). In the traditional society during the pre-harvest period, the common coping strategy of the Muong to overcome food shortage is going to the forests to gather yams and roots (Nguyen Ngoc Thanh, 1988). In Chien Village, Hoang Lien Son,

et al. (2003) reported that agricultural activities play an important role in the household economy. The average income from agriculture is about 7.325 million VND per year, which accounts for 74.1% of the total household income. Yet it is not enough for expenses on necessities of the household. Many households suffer food shortages from 3 to 6 months, and they have to depend on foraging in the forests to bridge this gap. Today, forests remain an indispensable resource for the Muong in Chien Village to generate more income in order to contribute to the household economy (LLINC social research team, 2004).

2. Chien Village: natural, socio-economic conditions

Chien Village is one of the 7 villages in Nam Son, a particularly disadvantaged commune in Tan Lac district, Hoa Binh Province, and is supported by the Government Program 135. Chien Village is in the northern part of Nam Son commune, and lies 700 – 1000 m above sea level. At this altitude, the climate is distinctly different compared to other areas in the district with two main seasons:

rainy season (from May to October) and dry season (from November to April of the following year). The average temperature is 20°C, but varies greatly between day and night and sometimes it changes abnormally. During the dry season, it is very cold with thick fog and frost. Sometimes the temperature can drop to 0°C (occurring in 1972, 1981 and 1995), which caused the fields to freeze and cattle and poultry to die. These natural conditions can greatly affect forests and economic activities of the local residents.

In 2005, Chien Village had 67 households comprised of a total of 331 people, which 159 are main labourers and all villagers are Muong. In general, most of the population in Chien Village, similarly in Nam Son commune, are young. About 46% of the population are under 18 years of age, with the majority (38%) being of school age (5- 18 years old) and the others (8%) are under the age of 5 years. The other half (48%) of the total population is accounted for by people of working age, while the elderly only make up 6% (see Table 1 below).

Table 1. Average family size and population structure by age (person)

| Commune | Family size | Working age (%) | Age groups (%) | | | |
|---------|-------------|-----------------|----------------|------|-------|---------|
| | | | Under 5 | 5-18 | 18-60 | Over 60 |
| Nam Son | 5.0 | 47 | 8 | 32.5 | 56 | 3.5 |
| Total | 5.0 | 47 | 8 | 32.5 | 56 | 3.5 |

People of the working age account for 47% of the total population in the commune. They are the main labor force for agricultural production. The results of our survey show that the agricultural workforce consists of about 38% males and 43% females. Non-agricultural activities are mostly undertaken by men, and often are confined to working in small trade and handicrafts in order to cope with difficulties in finding employment. Other common types of non-agricultural employment are commune authorities and teachers, which the majority are males. Presently, every household make a living based on agriculture work, while nearly all (98.5%) households also depend on industrial crops, forestry, livestock breeding and non-agricultural activities for additional income. In the village, households tend to have little assets; for instance, 13 households (19.4%) in the village have motorbikes; 4 households (6%) have sewing machines; 1 household (1.5%) has a plowing machine; 3 households (4.5%) have a rice threshing machine; and 3 households (4.5%) have a rice husking machine.

The reduction in population growth rate among the Muong can be attributed to the decade-old implementation of family planning policies. Rates have been reduced from 3% in 1979-1989 to 2% in 1989-1999 to 1.3% in 2005.

Like many other mountainous communes, Chien Village and six other villages in Nam Son commune have received support from the Government under Program 135 since 1999. At present, Chien Village has undergone many

changes. Residents' living standards have improved. According to the classification of households by the Nam Son commune People's Committee, there are 13 poor households, 40 households that have sufficient amount of food and 14 well-off households. However, from the perspectives of the local people, there are 35 poor households, 31 households that have sufficient amount of food and 6 well-off households in the commune.

3. Research outcomes and discussion

3.1. Familial and clan relationships and food security

3.1.1. Family

During the 1930s, Cuisinier affirmed that even though the Muong society was greatly affected and experienced changes in many aspects of the material and spiritual life, its socio-economic cell – the family - still had its special vitality (Cuisinier, 1995). Throughout historical changes until present, some traditional social institutions (such as the Muong) have gone or lessened their power due to their broken structure (clan), but the Muong family still carries out its function as an economic unit. At present, the traditional family model comprised of extended family members from 3 generations among the Muong in Chien Village is no longer common and has been replaced by the nuclear family consisting of a married couple and their unmarried children. At the time of our survey, the average family size in Chien Village was 4.91 persons/household, the smallest size was 1 person and the largest size included 12 persons. The result of the survey on family size is shown in the table below:

¹ Khong Dien, 2002: pp. 138, 171.

Table 2: Demographic structure of households

| Person(s) per household | Number of households |
|-------------------------|----------------------|
| 1 person | 1 |
| 2 persons | 1 |
| 3 persons | 5 |
| 4 persons | 22 |
| 5 persons | 12 |
| 6 persons | 7 |
| 7 persons | 10 |
| 8 persons | 4 |
| 9 persons | 1 |
| 10 persons | 3 |
| 11 persons | 0 |
| 12 persons | 1 |
| Total | 67 |

Source: Project survey, 2005

Among the 67 households, 48 (71.6%) were comprised of nuclear families, including parents and unmarried children, and 19 (28.4%) of extended families with three or more generations. There has been an increasing trend of household composition consisting of multi-generations to smaller nuclear families with only two generations. The reduction in family size can be explained in part due to the change in the family structure. In addition, it has been greatly affected by the Land Law, which is the legal aspect of rights for land use based on the Red Book guidelines is the main motivation for the separation of household). The result is household separations where household headed up by young families are created (heads falling between the age of 20 and 40 years), and making up a large proportion in the village. These same households encounter difficulties in availability of owning farmland, particular for the purpose of wet rice cultivation. A

qualitative survey in Chien Village shows that most of the poor and food insufficient households are young households that have small children, newly separated households, households in short of manpower (such as ones with elderly parents whose children are married and have their own families in separate homes) and households with many children.

During group interviews, the following reasons were cited why there are food shortages: high expenditures spent on weddings and funerals; lack of available farmlands; harvest loss due to natural calamities; lack of manpower; chronic illnesses suffered by laborers; lack of funds for investment in fertilizer (i.e., lack of capital); lack of water for irrigation; existence of droughts, which can affect the cattle; and poor or scattered farmlands. One type of households facing food shortages is comprised of young heads of households in newly established homes.

They are often faced with having to start a new life with little to no assets or money, as well as lack of manpower and presence of small children to care for. They do not have farmland or the capital to create opportunities for earning additional income.

Currently in Chien Village, there are 52 persons (15.7%) out of 331 who do not own land. The survey results indicated that most of the households facing farmland shortages in Chien Village have wives who come from other areas and have several children born after 1995 (year when land was allotted).

Adverse weather, droughts and floods also negatively contributed to the economy of Nam Son commune, particularly in Chien Village. A long drought in 1998 created a hardship and food shortages for many families in Chien Village. In 2005, floodwaters submerged the entire area in the village used for growing rice. This caused a serious loss in agricultural production, resulting in 80 % of households losing their harvest. Another major factor in the loss of rice production was due to crop pests.

Based on study interviews conducted, a lack of capital was often mentioned as a problem for households. Households facing food shortages are often ones that are poor. They encounter difficulties to take out loans from the bank for investment in production development due to a lack of assets to be used for collateral; thus, yields of rice are low because financial constraints in purchasing fertilizer. Another problem plaguing

households that lack capital is they often experience one lost crop, which can make the household economy unstable for several years.

Having no cattle for draught, households have to hire relatives, thus delaying soil preparation for sowing and increasing the risk of food shortages. In August 2006, 9 households in Chien Village did not have buffaloes or cows to plow the land. These households had to borrow draught cattle from their relatives, but unfortunately only have access to them when they are not in use. During the growing season, lot of manpower is needed for plowing, harrowing, and hoeing by hand; the husband pulls the harrow while the wife tills the land.

When facing food shortages, households in Chien Village often employ the following coping measures:

Gathering forest products

According to statistics of the Chien Village, Nam Son commune, there are 97 kinds of non-timber products, including 33 kinds of medicinal herbs, 32 kinds of fruits and roots, 12 kinds of vegetables, 4 kinds of orchids and many other forest products. Non-timber products can be classified into five categories, and all play an important role in the daily lives of the local residents. First, non-timber products are for daily use, such as firewood, medicinal herbs (used in curing diarrhea, dysentery, headaches, and pimples) and tonic medicinal herbs (identified and unidentified) to help increase strength and reduce fatigue after days of hard work. The

second category is made up of seasonal products, which help increase the diversity of foods (including vegetables, mushrooms, honey and others) for humans or livestock breeding. The third category is based on products, which can help to generate some income, such as orchids and *ben ba* (a kind of medicinal plant). The fourth category is products used for building houses, stables and making furniture and household articles (such as straw grass, palm leaves, rattans and bamboos). The fifth category is starch plants, which are only used during times of lost harvest and famine. These starch plants are diverse in species and require processing before use.

These non-timber products also can be categorized by the site of where they were obtained, such as from hills or stone mountains. The products from the hillsides include firewoods, yams, vegetables, bananas, bamboo shoots and straw grass. The products from stone mountains include some firewoods, different types of medicinal herbs, orchids, palm leaves, cat's ears, mushrooms, *ben ba*, vegetables, *bung bang* and *xe* (a type of plant used for making wine and is considered good for one's health), fruits and honey. The characteristics of the location where non-timber products are gathered are deciding factors in the labor distribution.

The gathering season depends on the period of growth of non-timber products. The season of vegetables, mushrooms, cat's ears, bamboo shoots and fruits is from the 3rd to 9th lunar months. The products gathered include firewood,

orchids, *ben ba* and other minerals (such as bat's dung and termite soil). Firewoods and medicinal herbs are gathered year-round for people's daily use. However, in some periods during the year, people gather more firewoods and medicinal herbs than usual. For instance, this occurs during the summer for medicinal herbs (from the 4th to 9th lunar months) because due to the heat and people's tendency to drink more frequently.

Sometimes during the off-season or when someone is expecting a baby, they gather medicinal herbs for reserves. Orchids and *ben ba* are often gathered between the 6th and 8th lunar months for the purposes of selling them. *Ben ba* can be sold at a rate of 600 – 800 VND per kg when fresh and 6000 per kg when dried. *Ben ba* only is available in stone mountains, which can be difficult to access and are usually obtained by male gatherers. They are often gathered during the pre-harvest month. Due to the fact that they are cheap, only poor households venture out and gather them.

Orchids can be gathered all year-round, with two species being the most preferred: *que* and *thao*. *Que* orchids are sold at a rate of 10-12000 VND per kg, while chopstick orchids are 8000 VND per kg and *thao* orchids sell for 6000 VND per kg. A poor family in Chien Village can gather 10 kg of orchids in a period of three months (from the 6th to 8th lunar months). Meanwhile, a similar family in Xom Village can gather 5 kg of orchids a month and selling for 50,000 VND per kg. So although the earned income from orchids

is minimal, it still serves as an important cash source for households during the pre-harvest period, especially among poor households. Other supplemental income comes from cat's ears and mushrooms of all types. A poor household can sell 4-5 kg of dried cat's ears annually for 20,000 VND per kg. In addition, other forest products gathered during the pre-harvest period are roots and starch plants, such as yams, brown tubers, *von* roots and *bung bang* plants to prevent food shortages and overcome famines.

Vegetables are gathered daily for livestock breeding. Nearly all women (90%) go out to gather vegetables every day. There are different types of vegetables picked including *sang*, *ron*, *tau bay*, *stellaria aquatica*, *khao*, *lom* and *hang* leaves, taro and banana. Banana trunks are used to feed pigs, while its flowers and fruits are for human consumption. A household with an average living standard

can gather about 10 banana trunks a month to feed their pigs. The trunks usually are gathered every two to three days to replenish the supply.

Working as hired laborers

Working as a hired laborer is a common strategy for some households facing food shortages. The study's findings indicate that there are two main types of hired laborers in Chien Village:

- Working as regular hired laborers in the province for several days (9/71 households)
- Working as seasonal hired laborers (3/71 households)

Jobs taken up in the province and seasonal employment include being an assistant mason, harvesting corns, collecting sugar cane leaves, cutting pillars, weeding, plowing and harrowing. Workers can earn between 15,000- 20,000 VND per day.

Hired work

"In addition to field work, I am hired to cut pillars, work on upland fields, grow maize, plow and harrow. Because we don't have money, I have to work as a hired laborer. Sometimes, I am hired to work at a quarry, earning about 550,000 VND a month and am provided with three meals a day. Our children go to school so we have to spend a lot of money to buy shoes, clothing, books, notebooks and pens for them at the start of the new school year. Only by working as a hired laborer am I able to earn money" (Bui Van Thong, 36, Chien Village).

"Our family always suffer food shortages in April and May every year. To overcome food shortages, from time to time, I have to work for others by harvesting maize and cassava crops as well as gathering bamboo shoots. I can earn 15,000 VND per day and also get a free lunch. In addition to working as a hired laborer, I often go to the forests to gather orchids so I can later sell them at the market every Tuesday" (Ha Van Da, 31, Chien Village)

Reduction of meals or replacement with other food sources

When facing food shortages, some households reduce the rationing of rice at each meal or replace rice with other foods (such as sweet potatoes, arrow-roots and cassava). For example, Mr. Ha Cong Tan and his family lost their harvest in 2005 and had to eat rice mixed with maize, which meant a combination of 1 kg of rice with 2.4 kg of maize. The maize is first ground or stewed, and then mixed with rice. Sometimes, three portions are made of rice and the last portion is from maize.

Stop sending children to school

Children are no longer allowed to go to school during times of food shortages. Parents temporarily have the children stay home to help care for younger brothers and sisters, or tend to buffaloes during the growing and harvesting seasons while parents are busy out in the field. In some cases, children do not ever return to school due to a shortage of available manpower, which was the case for the households of Mrs. Chit and Mrs. Sim.

Sale of products

The sale of domestic animals is another coping mechanism against food shortages for many households including those economically well-off. They are able to sell chickens and ducks at the Lung Van Market. Some households even sell pigs in order to buy reserves of rice. In a survey conducted at the Lung Van Market on August 21, 2005, it was noted that 17 persons from Chien Village had brought their products to sell at the market: 1 person selling soya curd; 1 person selling soya curd and pickled scallion heads; 1 person selling orchids; 1 person selling honey; 1 person selling chickens; 1 person selling eggs; 1 person selling dogs; 1 person selling herbal medicine; 1 person selling bamboo shoots and garlic; 2 persons selling only bamboo shoots; 2 persons selling pork; and 3 persons selling maize.;

. Borrowing

During the pre-harvest period or harvest loss, households fearing food shortage will borrow food from shops and later repay the loan. Some well-off households are able to barter with maize for rice, and exchange 22 kg of maize for 10 kg of rice.

Situation of food borrowing

"Last year, facing rice shortages, we had to barter 130 kg of white corn for rice, (35,000 VND/10 kg of white corn and 40,000 – 43,000 VND/10 kg of rice). So every 130 kg of white corn were bartered for nearly 110 kg of rice. But during the harvest season, the price of white corn was lower, only 30,000 - 31,000 VND/10 kg. In the past, it could be sold at 36,000 - 38,000/10 kg at the market. Nowadays (mid-2006 when maize was just harvested), 13.5 kg of white corn can be bartered for 10 kg of rice, and 22 kg of maize for 10 kg of rice.

"The shop owners who lend rice are mostly the local Muong, and the barterers of rice are the Kinh. When facing food shortages, first we borrow rice and then work as hired laborers or sell poultry and pigs for repayment" (Bui Van Thong, 36).

Land reclamation

In Chien Village, most of the households have some area of reclaimed land. In 2003, 7 households reclaimed 2,571,550 m² of land. In 2004, 17 households reclaimed 7,131,010 m² of land. In 2005, the number increased to 56 households becoming involved in land reclamation. At present, land reclamation in Chien Village is ongoing. Many reclaimed areas are turned into terrace fields for growing rice. Land reclamation is another coping measure to fight food shortages and is encouraged by the local authorities of the commune and Chien Village.

3.1.2. Role of the clan in ensuring food security

The clan of the Muong is a collective gathering of individuals sharing the same paternal blood line and worshipping the same ancestor. The organization of this clan is not as close-knit compared to other ethnic groups. There is no regular clan meetings or customs for worship. However, when the clan members hold major events for celebration of a new house, weddings or funerals, other members are required to contribute by donating rice. According to the customs of the Muong, when facing difficulties and misfortune, members of the same clan engage in both material and spiritual sharing. They readily share assets, buffaloes, cows, poultry, pigs, trees and gardens.

Currently in Chien Village, 57 households bear the surname of Ha, while 8 households have the name Bui and 2 households with Dinh. Families of the same clan often reside in close proximity

to each other so they can help one another, particularly in agricultural production. As a traditional society, the Ha family clan had common land to till and the harvested products went towards the clan's fund used during times of relief or when any member suffers from food shortage or illness. Since the establishment of agricultural cooperation, this common land has disappeared.

Researchers have noted the mutual relationships between members of the same clan. For example, there were four cases where people of the same clan joined in land reclamation efforts, two cases of joining in cattle-raising and five cases of borrowing food from relatives when facing shortages.

3.2. Impacts of traditional cultural factors on food security

3.2.1. Economic activities of groups of households

The Muong have a long-standing tradition in wet rice cultivation. They also practice upland farming, which provides additional food supply when there are food shortages. They grow mainly rice and cassava on their upland fields. Surveyed statistics show that Chien Village has a total natural area of 214 ha, including 14.9 ha of wet rice, 25 ha of maize, 11 ha of cassava, 11 ha of arrow-roots, 1.147 ha of *la quan thao*, 1.5 ha of fruit trees, 22.2 ha of tea, 1.9 ha of residential land and the remaining area is forestland and unused land. The survey findings reported an average area of wet rice area for a household in Chien Village is about 2,376 m² (about 494 m² per person). The

problem is that the wet rice output only is able to meet 65% of the food demands of the community.

In addition to rice, maize and cassava are grown on a large scale. Maize is used for many purposes, and can be used differently from one village to another, between households within the same village, and even within the same household at different times of the year. During the pre-harvest period, people can use maize as consumption, for selling, and for cattle and poultry feed. Cassava also plays an role important like maize, but is mostly used by the family and rarely sold. Cassava can be grown on plots of land where the soil is exhausted and located far from the residential area. Most of the household families can collect cassava at any time when they need it. This crop helps ensure food security for poor households during times of possible food shortages.

At present, the crop structure of the Muong in Chien Village has undergone many changes. In addition to some traditional rice varieties, the Muong use some new rice varieties such as Dai Bac (Taipei) 8, which was imported in the early 1990s. Through many years of experimentation, the local people discovered that this rice variety is easily adaptable to the local ecological and soil conditions since it is highly resistant to cold weather, crop pests and does not fall down. Agricultural commodities in Chien Village are arrow-roots, beans and medicinal herbs. Statistics of Tan Lac district indicate that on average, each household in Nam Son commune can

produce 1191 kg/year, 846 kg/year in Bac Son commune and 781 kg/year in Ngo Luong commune. For an average household with 5 family members, the rice share per capita per month is 14 kg, which is insufficient. On average, a household can produce annually 1215 kg maize and 975 kg cassava (Statistics of Tan Lac District, 2004).

The economy of the Muong in Chien Village remains an autarchical economy. In the past, people in Chien Village could grow rice crop only once a year. Nowadays, construction of 15 irrigation canals and 12 dams have provided the means to have two rice crops grown on 10 ha of land. There is nearly no fallow land left. People use high-yield rice, maize varieties, fertilizer and pesticides in agricultural production, thus attaining high output. However in general, their production skills remain traditional and primitive in comparison due to use of rudimentary farming tools. The agricultural products are mostly used by the family. Just recently some households have started to earn income from their agricultural products used as commodities. Road transportation has been upgraded, thus facilitating the exchanges of products with private traders. Marketed agricultural and forest products include fruits, arrow-roots, yams, sugarcanes, grown nuts and medicinal herbs.

Raising cattle and poultry is also an important source of income for households in the village. Most of the households raise buffaloes, cows, pigs, chickens and ducks, but tend less to goats and horses. Findings

from a survey conducted in Chien Village reported that all surveyed households (n=67) raised between one to three buffaloes, while 88.1% (n=59) households raised up to three cows and 11.9% (n=8) raised four to five cows.

People raise buffaloes mostly for agricultural labor. Only about 10% of surveyed households use buffaloes for commodity. Buffaloes and cows are also raised for dung used in rice and maize cultivation. At present, all households in Chien Village raise pigs, with the highest number having 7 to 8 and the lowest having only one. There are two main purposes to raise pigs and poultry: 1) Majority (76%) of surveyed households used them for commodity; and 2) Many households use them for slaughter during festivities, weddings, funerals and celebration of a newly constructed house.

The custom of letting cattle graze freely no longer exists. Nowadays, people in Chien Village often tend to cattle in their own grazing area or common grazing area in the village and commune. The grazing grounds are mostly forestland or fallow, hilly land. In 2005, Chien Village had reported 132 buffaloes, 140 cows, 166 pigs and 1550 poultry.

3.2.2. The custom of mutual help in the community

Communality and collectivity are noted attributes of the Muong. These characteristics are depicted in many aspects of life. Having a collective production system has been popular and very significant to each household.

Mutuality in helping each other can be considered a safety net for households. An organizational characteristic of work teams is relies more so on the ability to rally members by season and by work to volunteering order to meet an urgent need of manpower and seasonal demands. Agricultural farming needs collective labour at certain stages, such as soil preparation, rice transplanting and harvesting. Therefore, the *lu nhau* (work exchanges), where each household in the village allots one or two work days to help another household during growing and harvesting seasons, continues to exist. At the end of the season, if any household has not yet repaid workdays to another household, they can do this on another occasion. For households lacking manpower or have faced misfortunes, they are provided assistance by fellow villagers free-of-charge.

According to the village's regulations, any household that builds a new house is given 700 workdays, and well-off households are required to send their members to help.

3.2.3. Impacts of customs and habits on food Security

The Muong in Chien Village still preserve many customs and habits of offerings, particularly on the occasion of construction of new houses, weddings, funerals and other rituals. It is customary that every household abides by these traditions, even if they can pose a heavy burden for some households.

The trend of young married couples in moving out from an extended family setting to live in a new, separate house only with nuclear family members has constrained the household's economic situation, particularly in regards to food security. According to Chien villagers, a house built on stilts that is 50 m² would require 30 m³ of timber (prepared beforehand) and cost 8 - 9 million VND (includes payment to builders, purchase of corrugated cement roofing sheets, payment to those who come to help, and purchase of rice, wine and other offerings for the ceremony to celebrate construction of a new house). Most of the households have to borrow money or sell their buffaloes, cows, pigs and poultry. Thus, economic difficulties are encountered in managing households' budgets and food security safety. In an interview with a villager, Mr. Bui Van Thong, he described the breakdown of costs in construction of his new house:

Corrugated cement roofing sheets: 2,400,000 VND, nails for nailing beams: 120,000 VND, string: 60,000 VND, forelocks of corrugated cement sheets: 140,000 VND, wall and window frames: 1,700,000 VND, payment for labour force: 3,200,000 VND, sticky rice: 100 kg, plain rice: 60 kg, 12 jars of *can* rice wine, 120 liters of wine; 60 kg of poultry. Total cost is 9,700,000 VND.

Other rituals practiced by the Muong also cost a lot of money. For weddings, there are specific regulations. First, the groom's family has to bring to the bride's family 2 kg of rice during the engagement.

Then 2 kg of tea is given. Finally for the wedding, 500,000 VND is spent and no more than 70 kg of pork, 120 kg of rice and 15 liters of wine. However, study interviews revealed that very few households implement these customs. For example, Mrs. Bui Thi Sim stated that when her son wanted to get married in 2003, they had to present to the bride's family 80 kg of pork, set of clothing for the bride's grandmother, 20 liters of wine, 120 kg of rice, two chickens and 500,000 VND on the day he was going to get engaged, in addition to a pig weighing 80 kg, 100 liters of wine and 150 kg of rice (worth about 6 million VND) on the wedding day. In order to afford these offerings, Mrs. Sim had to borrow money from her siblings and relatives. To date, her family still owes 1.2 million VND and 100 kg of rice. Whenever there is a wedding in the village, each household has to send a representative to attend the wedding. The family member in attendance should bring a cash gift of 20,000 – 30,000 VND for brothers, sisters or relatives and 10,000 VND, 1 kg of rice and a bottle of wine for neighbors. Another interviewee, Mr. Ha Van Tan, stated that he has to spend 300,000 to 400,000 VND on average each year for wedding gifts. This is a great financial feat for a farming household in Chien Village.

Based on customs after giving birth, the bride has to take the baby to her parents' family and the groom has to bring along a pig weighing about 50 kg, 40 kg of rice and 50 liters of wine for the purposes of organizing a party to introduce the baby.

After that, when the baby returns to the husband's family, they have to prepare a pig weighing about 70 kg, 40 liters of wine, 2 chickens and 40 kg of rice for a ceremony to welcome back the baby. Each ceremony can cost up to 1 or 2 million VND. Many households find themselves in a difficult predicament, where they cannot afford to pay for such ceremonies so they have to borrow to avoid being subjected to ridicule by fellow villagers.

A Muong funeral in Chien Village costs about 3 to 4 million VND, which included the price of fabric used to cover the coffin, ceremonial offerings (such as pigs and dogs) and food for the mourners. According to Mr. Ha Van Dai, during a funeral held for his father in 1998, he had to slaughter 2 pigs, 21 chickens and a dog in addition to 165 kg of rice and 89 liters of wine and purchasing fabric. He purchased 10 m of red fabric to cover the coffin, 15 m of white fabric to make mourning bands and 4 jute mats. The total cost of the funeral ended up costing him 3.5 million VND.

Funerals are not only costly for the host, but also for the community. Muong customs dictate that each person who comes to pay his/her respects has to bring along 1 chicken, 1 kg of rice, and 10,000 VND and a bundle of firewood.

In addition, the *oai than* ritual (birthday) (organized in almost all Muong families in Chien Village) also costs about 100,000 – 200,000 VND/year.

3.3. Impact of educational level and capacity to access policies on food Security

3.3.1. The relationship between educational level, capacity to access scientific and technological advances and food security

Findings from the survey conducted in Chien Village depicts the following about the age structure of the heads of households: 17.9% (n=12) under 30; 40.3% (n=27) between 31- 40 years old; 25.5% (n=17) between 41- 50 years old; 10.4% (n=7) between 51- 60 years old; and 6% (n=4) over 60 years old. The average age of a head of household in Chien Village is 39.8 years.

In regards to the highest education level of the heads of households, they are as follows: 26.9% (n=18) primary level; 68.7% (n=46) lower secondary level; and 4.5% (n=3) upper secondary level. The average highest educational level among 67 surveyed heads of households is grade 7. In general, most of the heads of households have a lower secondary educational level who are able to access scientific and technological advances in agriculture.

3.3.2. Access to policies

Prior to *Doi Moi* (Renovation), the production mechanism in Chien Village was collective. The agricultural cooperative managed and controlled all farmland, labor force and means of production. Since embarking on *Doi Moi*, particularly since the implementation of Resolution 10 of the Party Central Committee Political Bureau, land and

forest areas have been allotted to households in Chien Village.

The allotment of land and forest areas began in 1995. All family members present at that time were given land. Each household family had its Red and Green Book for their residential and agricultural land. In addition, the households were allotted a certain area of forestland and forest for cultivation, use and protection. Households do not have to pay tax for allotted forestland. They also are given 50,000 VND per year for forest protection. In the protected forest area, households are entitled to collect firewood, bamboo shoots and some timber for housing construction, but are responsible for paying tax on the allotted farmland. In addition, they also are entitled to reclaim a certain area of wasteland out of the management of the Land Administration for farming without having to pay taxes to the Government. Instead, they have to contribute part of the products to the village to pay security guards and deputy head of the village. According to the commune policy, households can lease land for farming, but are limited to about 1 ha. The problem is that the leased land is usually from wastelands and has poor soil. This granting of the land only provides a temporary solution for households to overcome food insecurity, particularly among young households.

The policy on allotment of land and forest to households has been quite effective. By 2005, the rights granted of land use to households were completed in Chien Village. Results from study survey

revealed that the allotted area of farmland was an average size of 2,376 m² per household. Each person was granted 493 m² of lowlands, 643 m² of uplands and 129 m² of forestland.

The land and forest entitlement varies between household categories. Well-off households were given 3000 to 4000 m² of wet rice fields and about 5000 m² of upland fields, compared to poor households that only have 1000 m² to 1800 m² of wet rice fields and about 2000 m² of upland fields. It is worth noting that the land allotted for wet rice cultivation for well-off and poor households was unevenly distributed in different areas and were scattered. For example, the family of Mrs. Bui Thi Sim has 1800 m² of wet rice land, but it was divided into 42 plots and located in 7 different areas.

In Nam Son commune, particularly in Chien Village, people are beneficiaries of Government programs on hunger eradication and poverty reduction, such as socio-economic development programs targeting hard-to-reach areas in mountainous and remote communes (known as Program 135). The aim of such programs is to improve people's material and spiritual lives, and help these communes to escape poverty, improve technological skills and integrate into national development. Chien Village currently receives support and investment from the State budget for infrastructure construction and economic development, which includes the construction of 14 clean water tanks, 1 km of rural road and subsidies on fertilizer, rice, maize seeds

and medicinal herbal plants. Poor households also have received some rice relief on special occasions, such as Lunar New Year and during the pre-harvest period.

In addition to the poverty reduction program of the Vietnamese Government, there have been other programs implemented by local and international non-governmental organizations such as FFI (World Wildlife Organization), JVC (Japanese International Volunteer Organization) and ETSP (Swiss International Cooperation Program).

The participatory rural development project implemented by JVC has supported the construction of small irrigation works and developed a model of growing subsidiary crop on one-rice crop fields. It also has established a cow bank. In other words, each poor household is given a loan of 4 million VND to buy cows, and repayment is made in installments.

The project on training popularization for upland forestry development implemented by the Swiss International Cooperation Program (ETSP) has trained local people how to use non-timber products as well as how to protect their forests.

The Pu Luong - Cuc Phuong nature conservation project implemented by FFI provided technology transfer in growing fruit trees and forests, raising cattle and poultry and improving people's awareness on forest management and protection.

All these projects are all aimed at helping the ethnic minorities eradicate

hunger and reduce poverty through income generating activities, improvement of living standards, capacity to access services, better infrastructure and employment of new farming techniques.

4. CONCLUSION AND RECOMMENDATIONS

Based on the results this study, there are nine main reasons that can lead to food shortages. Six of these reasons are directly related attribute to households: 1) High costs of weddings and funerals; 2) Lack of manpower; 3) Chronic illnesses of laborers; 4) Insufficient money to buy fertilizer (lack of capital); 5) Lack of availability of draught animals such as buffaloes or cows; and 6) lack of farmland. Furthermore, three indirect reasons that also contribute to food shortages include: 1) Natural calamities causing harvest loss; 2) Lack of water for production; and 3) Poor and scattered farmlands. Households of young married couples with small children, lacking manpower or having several children often are at higher risk for food shortages. In order to cope with food insecurity, households employ different measures, such as gathering non-timber products, logging, working as hired laborers, reducing meals, having their children stay home from school to help in the house, selling products and reclaiming land. However, these measures often are temporary solutions used during the pre-harvest period, harvest loss and famine.

In Chien Village, the household is an independent economic unit, is completely

suitable to the current trend of development, thus facilitating the implementation of the Party and Government guidelines and policies (allotment of land and forest and population planning). The role of the clan seems to be fading, and there are no informal linkages in the village. On the other hand, mass organizations have made certain contributions to the common activities of the community.

Family rituals in Chien Village are still preserved and passed on. People follow tradition in spend a lot of money on funerals, weddings, home repairs and construction of a new house. These are costly expenditures that place a great burden on the household's economy status; thus, one of the direct causes for food shortages and incurred debts for many households.

To ensure food security for residents of Chien Village, we propose the following recommendations:

- Help increase household incomes since the per capita income is low. In addition to promoting food crops to ensure food security, consideration should be given in growing medicinal herbs and fruit trees as a way to generate additional income.

- Build capacity for the Muong by improving the educational level of the villagers by adopting policies to promote and support people to further their education. The capacity to access scientific and technological advances in Chien Village is limited, particularly among poor households.

- Organize more training courses relevant to current local conditions in the

village, such as increasing agricultural knowledge and skills, livestock breeding, farming techniques and technological advances, as well as continue to restructure crops and support hillside farming models.

- Create stable jobs and income for people, particularly targeting young households, households lacking manpower, households that only have elderly members and households having many children.

- Invest in building irrigation works to ensure that there is enough water for the entire area used for wet rice cultivation in the village.

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