

Development and Change in a Hmong Community: A Case Study of Hmong Farmers Response to Market Economic on Taijiang County, Guizhou Province. P. R. China

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1. INTRODUCTION

Rural China has been the target of dramatic change through development policies in agricultural production during past six decades. The major transformation was the shift from a planned economy to market economy after 1979. The rural development beginning adopted Deng Xiaoping's "Trickle-down" rural development policy, known as the "Permit Some Peasants to Get Rich First" policy. Rural production changed from a collective system to the Household Contract Responsibility System. Individual households gained access rights in land-use and forest management. The individual household replaced the production team and became the basic unit of agricultural production in rural areas. Moreover, individuals engaging in economic activity are allowed. The state monopoly and planned procurement system has been replaced by free market trading. The government has encouraged farmers to pursue numerous private ways to gain prosperity.

China's forest and land use policies have changed many times since 1979. In 1980, based on the household contract responsibility system, usufruct rights to farmland have been re-distributed from collectives to households for 15-20 years, although ownership of land still remains with the state. But each farm household is allocated "Responsible Mountain" for forest management. Farmers manage the farmland for their own needs and benefit. Hence, farmers have been given greater power to decide how to use land and what crop to grow. This reform has led to a great increase in agricultural output and rapid development in rural China. It has also led agricultural production to become more commercial, resulting in more dynamic land use.

After the flooding of the Yangtze River in 1998, China's forest policies changed from an exploitation-oriented to resource conservation approach. The policy of "Natural Forest Protect Program" and "Upland Conversion" was adopted. The natural forests have been protected. In practice, a national reforestation campaign has been launched in China. Where farmland slopes over 25 degrees, trees were required to be planted in 2000. Indeed, the "Great West China Development" policy has been implemented since 2000. These strategies pay more attention to ecological conservation. Thus, many reforestation and economic development projects have been introduced to rural areas, especially in ethnic areas of west China. So, the plantation has become one of the mainstream activities of rural development. However, economic structure changes have brought drastic impacts on human life. After the rural transformation to a market economy, it is interesting to observe how it has changed the livelihood of farmers in China, and how these farmers have responded to the transformation.

Guizhou is the center of the Hmong population in China. According to the population survey in 1998, 2.6 million Hmong live in Guizhou, accounting for 48 per cent of the total population of Hmong in China. Hmong people who live in Guizhou have a long history of

forest management. They have a custom of tree cultivation, especially Chinese fir (*Cunninghamia Lanceolata*) cultivation. Fir forestry is central to both spiritual and economic life in Hmong society. They live in post-pile houses, use fir furniture, and use fir branches as firewood. In Hmong communities, fir forestry is the symbol of economic prosperity. A nice fir house indicates the households' economic status.

In recent years, in response to market intervention and state rural development policy change, the Hmong farmers rationalize their behaviors of forest management. The Hmong farmers started to change from their traditional fir to fruit-tree cultivation, because fruit-trees are fast growing and provides quick returns. Farmers have cut the less-economically valuable trees on their allotted land to grow the more profitable fruit trees. Consequently, since the mid-1980s, and especially in the 1990s, fruit-tree has developed dramatically in many communities in Guizhou.

However, market demand is a significant factor in fruit tree production. The uncertain price of fruit has led to both positive and negative changes in tree cultivation. In some communities, overproduction of fruit has resulted in diminished market demand. Lots of fruit could not be sold or were sold at very low prices. Farmers now cut down trees with no economic value, grow other fruit trees again, change their land-use patterns, and seek other earning activities. Finally, Hmong farmers gradually lose interest in forest management. In fact, a cycle has emerged in many communities of growing trees, --cutting trees down,--growing trees again and then---cutting trees again. This practice seems to mirror the recent forest resource management transition in China after market reform. In this study, I am interested in exploring the way the Hmong farmers have changed their forest use practice from timber tree planting to fruit-tree planting, and finally losing their interest in tree cultivation altogether.

There have been at least two approaches to explaining farmers' responses to an increasingly dominating market economy. A number of scholars have taken a "production approach" to explain farmers reactions and the consequences of rural development problems. This approach focuses on farm production systems. It puts an emphasis on resource use, productive relations, and labor organization change rather than local history and cultural diversity in social change. Suryanata's study (1994) on fruit-based agroforestry in Java describes market incentives which change the social relations of production, creating unexpected land-use patterns. Shifts in land-use also reflect individual responses to market opportunities.

In order to understand local practices in more detail, some scholars have chosen to take an "interpretive approach" to explain farmers' responses to market economy as an action change. These scholars are interested in using the hermeneutic or meaning-centered approach to study how social life changes. They reject the positivistic approach and adopt the interpretive approach to understanding social reality. The interpretive approach emphasizes that social reality is not objectively given. It processes unfolding independently of actors' understandings of their social world. Social life is inextricably shaped by culture and meaning, since actors use their understandings to adjust to and change the world of which they are part. The interpretive approach encourages researchers to pay attention to local histories and cultures, developing models of social change from the bottom up rather than by contribution from empirical data. For example, Scott (1976) explains the peasant perception of the world. He describes peasants as having a principle of "safety-first," and being just interested in securing their subsistence base. Hefner (1990) has adopted this approach to understand

peasant experiences of political and economic change from the pre-colonial period to today in Indonesia. He uses the interpretive approach to examine the forms and meanings of a people's way of life and the circumstances in their sustenance and change.

This study focuses on the predominant ethnic group in Guizhou, the Hmong people who have a long tradition in forest cultivation and have adopted fruit-tree cultivation. Their responses to the market economy, can reveal the dynamics of rural transformation and its local meanings. These responses and transformations differently have implications for national policy. To do this, this research examines Hmong farmer behavior changes in tree farm management and their definition of "tree." These investigations contribute to an overall understanding of the process of Hmong farmer responses to the market economy. In addition, the analysis tries to come to an understanding of how the Hmong people interpret structural change through their discourses and meanings. A productive approach has been used to gain a detailed understanding of 'how' and 'what' practices have changed in the Hmong community. This study not only attempts to understand what Hmong people have done, but also know why they do it. Therefore, the interpretive approach is been adopted for analyzing this research. This approach supports the investigation of both productive practices and discursive practices to fully understand changes in agroforestry practices.

2. Conceptual Framework

The conceptual model illustrated in **Figure 1** shows agroforestry practice changes in Tageba. The changes both in productive and discursive practice are farmers' responses to market economy and rural development policy.

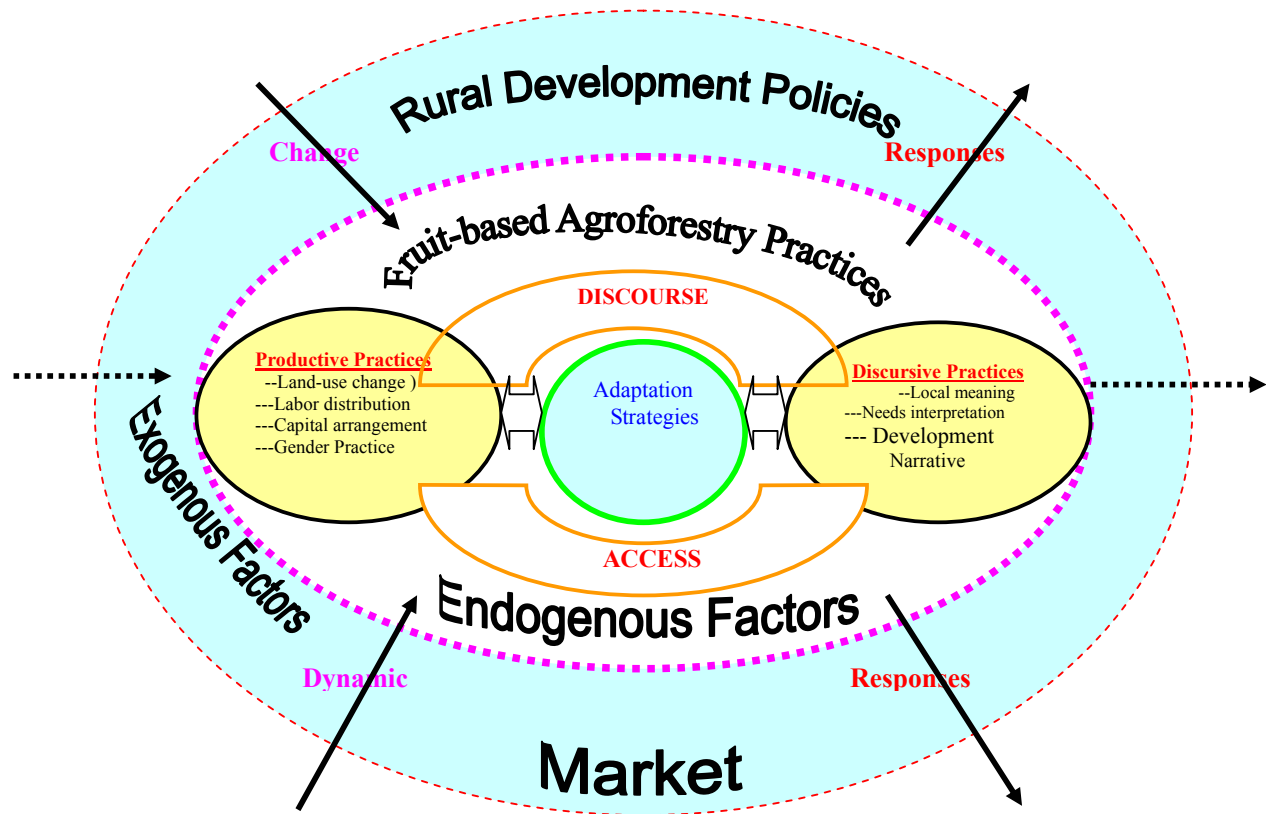
In this model, firstly, the market economy and rural development policies are considered. since 1979 farmers have the rights to decide how to use their land. At the same time, the market economy has been adopted since the mid-1980s. Farmers can sell their farm produces and buy their daily goods in the free market. The market has introduced new social norms and values into Hmong society. In responding to the market and policy changes, Hmong farmers change their patterns of tree cultivation according to their self-interests and perceptions. Some of them change their traditional fir cultivation to grow fruit trees in order to earn cash income rapidly. Others maintain the traditional practices in order to reduce the risk. Thus, market and rural development policies are major external factors affecting agroforestry practice.

Furthermore, Gudeman's notion (1992) of "practice" for the analysis fruit-based agroforestry practice. In order to understand in details about farmers' practice changes in agroforestry cultivation, this study focus on two dimensions; productive practice and discursive practice. These two dimensions of change not only illustrate what farmers "did", but also explain how farmer "said." Investigation of the two dimensions will allow me not only to understand how farmers change their practice of tree cultivation, but also know why farmers change their practice.

At the productive level, therefore, my study focuses on land use pattern, labor distribution, and capital arrangement on fruit-based agroforestry cultivation, because agroforestry is a land-use system (Michon and Foresta, 1999:381). Land, labor, and capital are major elements relating to tree cultivation. In investigating land-use pattern and labor distribution changes can understand how farmers respond to market opportunities and development policies in production dimension. However, based upon their different interests as well as access to market, land, and labor, farmers may choose different strategies of tree cultivation. Therefore, the concept of access is relevant in understanding differentiation of their responses to market.

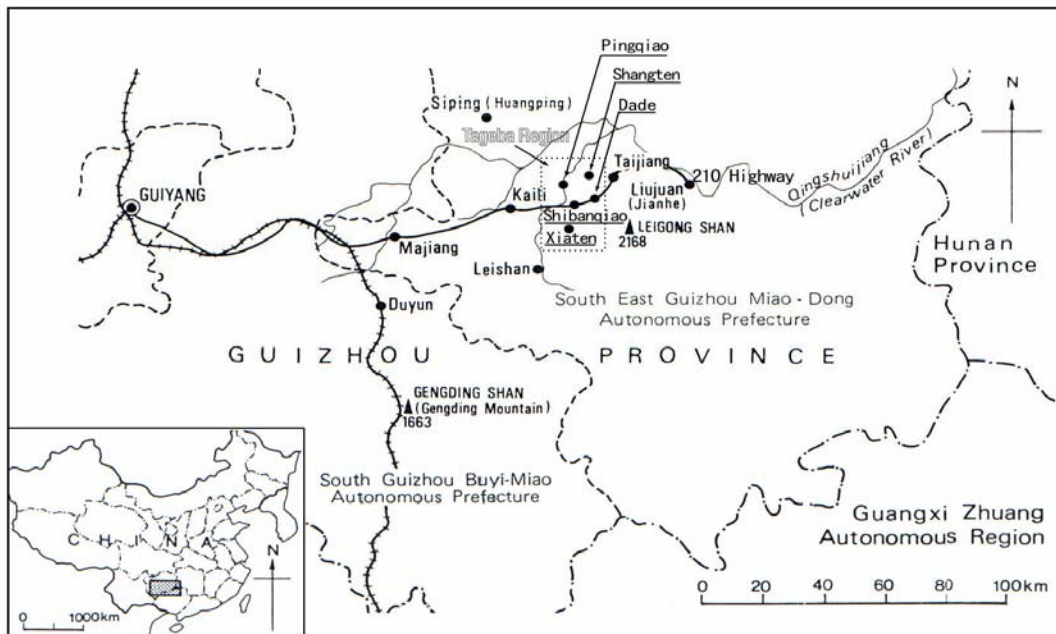
At the discursive level, the interpretation of agroforestry is taken into consideration in this model. Fruit based agroforestry is often involved different needs, such as, subsistence needs and economic needs. I follow Fortmann's (1995) lead on "contestations over resources by many meanings" to examine the meanings of tree cultivation as interpreted by farmers. In fruit tree cultivation various interpretations as well as needs discourses are manipulated by different people interests, experiences, and knowledge. They

overlap and make claims on the same practice of tree cultivation. Farmers pursue subsistence needs, governments pursue political needs, and businessmen pursue economic needs. Different meanings and needs have to be interpreted by different groups. I therefore use Hoben's (1995) term of "cultural script for action" as well as Hefner's (1990) interpretive approach in order to understand why various actors participate in tree cultivation as well as change their practice. In this model, therefore, local meanings, needs discourses, and development narratives on tree cultivation are taken into consideration.



3. The Development and Change in Tageba Community

The research site at Tageba is a Hmong community where was the first to adopt fruit tree cultivation in Taijiang County. Tageba is located in the East of Taijiang County. The Hmong people reside in this community more than 300 years. Tageba is an administrative community (productive brigade). It includes Shangtan, Xiaten, Dade, Pingqiao, and Sibanqiao natural village(groups). There are 2,081 persons in 249 households, and 78 per cent of the populations are Hmong.



3.1 Tree Cultivation in Historical Context

According to farmer's narrative, most of land here was formerly forest-covered, and there were many species of trees, such as fir, pine, and maple. Today, forest has been destroyed due to unplanned cultivation. The big trees and valuable wild animals are disappearing. But there remains some old-growth forest under the government management where local people are allowed to cut down a certain numbers of trees for housing, not for sale. The agricultural production system was very much oriented towards subsistence economy. Farmers produced these products for self-sufficiency or for exchange in community. The principal product was timber and rice. Farmers grew rice in the wet fields and planted fir trees on the uplands. They also grew vegetables on the hillsides and raised livestock. The farmland was a mixed cropping system. Farmers grew various crops in the garden, such as maize, corn, cucumbers, chilies, potatoes, soybeans, sesame, etc.

The mountain areas were dominated by natural forestry or regeneration forestry. Chinese fir and mason pine were the main species. The whole community had forestry areas totaling 1,861 mu and bare mountains totalling 1,032 mu. Historically, in the five villages, forest products were a major source of income: Planting and logging were the major activities of farmers in this community. However, farmers have a custom of growing a few fruit trees around the border of the fields.

Before 1949, landlords organized Tageba's agricultural production. At that time, there were two other big landlords in this area. They dominated large amounts of land, and hired poor people as labor on their farms. At the same time, several rich households also bought small land from landlords using silver coins. However, the communist revolution in 1949 completely changed the shape of Tageba society. During 1949 to 1952, land was distributed from three of landlords. And a communal governing body was established. Poor people were liberated from the farms of the landlord. In 1958, Tageba became a production team under the Taigong people's commune. Dade, Pingqiao, and Shangten villages were all under the Tageba

production team. At that time, the commune dominated all lands. All the villagers' private farmlands, domestic animals, vegetable gardens, and fruit and bamboo trees became common property of the people's commune. A public dining hall was set up in Tageba. The most telling practice was that even trees or fowl that one found in the mountains had to be counted as public income and shared by all by which means the all property were a public ownership.

In 1962, following a state campaign of "Never Forget Class Struggle"(1963-1966), the political campaigns of "Socialist Education" (1963-1964) and "Four Clean-Ups" (1965-1966) were launched in Tageba. All of the landlords, businessmen, and rich peasants of the village were made "class enemies" and targets of "class struggle." Most of the relaxed policies and private activities of the past few years of communist rule were criticized as being "of the revisionist line" and "a capitalist restoration." Indeed, when all of these campaigns could not achieve Mao's goal: purification of the party and country and continuation of the revolution, he turned directly to the power of the masses, especially the young students to achieve his goals. So he launched the Great Cultural Revolution (1966-1976). Thus, all resources and production had to be rearranged by the collective. Any limited private sector left over from previous attempts (such as private plots, domestic animal, or fruit trees) became collectivized. All villagers worked collectively to achieve production points; at the end of a year they received grain and cash according to their point.

Paddy fields were distributed to individual households with an area proportional to the number of family members to making living in 1980. In addition, in 1984, forestlands was also allocated to individual households. Individual farm cultivation has been allowed by the state. In Tageba farmers began to plan their "own" forestland to make additional income. Some households started to plant tea, plum, and pear, because the soil and climate in Tageba are very good for these species. But mass cultivation of these trees required high technology and capital investment. Therefore, most farmers only grew a few fruit trees on their farm. The timber logging and selling firewood remained the preferred way to earn cash.

Commercial fruit cultivation occurred in Tageba in the mid-1980s. With the promotion of market-oriented forest cultivation, the diversity forest development scheme was adopted by the local government in 1982. There is documentation of planting and protection of high-value timber species, such as indigenous chestnuts and loquats. In 1983, Taijiang's government set up the Agroforestry Extension Project (AEP). This project was first tested at Tageba. County Forestry Bureau first introduced chestnut to Tageba village in 1984. It really became popular after 1986 when domestic chestnuts were allowed to fetch fairly high market prices. The village headman organized this program. He applied for the low-interest loans of about 12,145 yuan from the AEP, and then allocated these loans to individual households contractually. Farmers were introduced to seedling production and grafting technology. Chestnuts were promoted and widely adopted by farmers in Tageba. The whole village therefore planted 128 mu of chestnut trees.

Tageba became a center of pear planting in 1995. However, when the price of chestnuts declined from 10 to 5 yuan per kg, farmers gradually lost interest in chestnut tree growing. As one cadre said, "During the first two years, nearly all households were eager to participate in the chestnut cultivation project, but this eagerness soon changed to disillusion when their expectation and efforts were not rewarded." After this failure the county government adjusted the agroforestry strategy by introducing pears into Tageba.

Farmers were encouraged to plant new species in small experimental plot in their farm before expanding the area planted. Until 2000, 80 households were participating in fruit tree

cultivation. According to township records, during the last fifteen years (1985-2000) the government invested a total of about 1.8 million yuan to develop fruit farms in Tageba, which had created fruit tree plantation of 1,870 mu by the end of this period. Planted species included pear, peaches, waxberries, oranges, and plums. Many large-scale fruit farms have emerged in Tageba. Fir cultivation is still maintained in some remote mountains or uplands. Fruit farms make up 38 percent of the total area. In 2000, the fruit produced in Tageba added up to about 500 tons.

Under market intervention farmers have paid more attention to faster return trees cultivation as well as pursued benefit maximization on their farms. However, due to the different ecological settings and resources of the five villages in Tageba, each has employed different practices. Shibanjiao and Dade villages have adopted the fruit tree cultivation faster than other villages because of they locate around road. But, in remote villages, such as Shangten and Xiaten, because these villages access to information, loan, new technology, and market is more difficult to obtain than other villages, the patterns of land use has changed slowly which means that farmers have still maintained traditional cultivation.

3.2 Tree Cultivation in Cultural Context

The Hmong farmers have accumulated many experiences and knowledge about tree cultivation. For example, the Hmong never cut maple and old trees as these are considered “friends of the ancestors.” The Hmong consider trees as equal to human. Children cannot climb old tree for they believe that this goes against will of the spirits. The Hmong believe that the sickness or death will occur, if people cut or climb old trees. Hmong in Tageba consider that everything on the earth comes from the fog. There is one well know Hmong song which presents this story. “A long time ago the world had no things...look the ancient era. The grass has not grown; the mountains have not emerged; the hills have no trees; the lowlands have no grain; the village has no people. Who has come to the world first? Fog came to world first.” Hmong think that the ancestor of humans is *Jiangyiang* who was formed by the fog. They believe that a maple first emerged in the fog, and then the ancestor of human, *Jiangyiang*, appeared as an image on the maple tree. Obviously the Hmong think fog and tree are the source of world.

The Hmong people in Tageba believe that human emerged through the process: maple-butterfly-people. In the “Maple Song” narrated an interest story: “A long time ago, maple the trees produced ‘meipong’ and ‘meiliu’. ‘Pong’ means flower in Hmong language; ‘Liu’ is butterfly; ‘Mei’ is mother. So, ‘meipong’ and ‘meiliu’ means mother of butterfly. Then the mother of butterfly played with foam of the water. After several years the mother of butterfly produced a dozen eggs. The mother butterfly left these eggs to hatch with her friend chicken. After twenty years, the jiangyiang was born, and he was regarded as the ancestor of human in Hmong society. Even this myth has no scientific evidence, but it percents a frugal materialism’s viewpoint that Hmong people cognize nature as well as world. In Hmong thought, human emerges as a result of natural change. Trees emerge in the world before men. So nature is a spirit as well as a place where human is born. People are just a guest of nature. Hence, people should take good care of and protect nature. The Hmong in Tageba prohibit people cutting maples, especially the pregnant women.

The Hmong in Tageba believe that everything has a spirit and being. Their ancestors organized everything of the world including their spirit and forestry. So in Tageba, a popular well known sentence is: “Old trees protect the village, old men manage the affairs.” People

believe that the old trees around the village have a spirit that should be preserved. Old people often tell children a story: “Tree has a spirit and feelings. If you cut it in the day, in the night, it will weep like people. The old tree is like the old man, it likes to play with children.” The children become ill or cry, maybe, because his or her spirit is kept by the tree and can’t go back home. So the best way is for parents to burn joss sticks or joss paper under an old tree. After this, it is believed their children will get health. Most people believe big mountain has spirits in the large forestry areas. A big mountain spirit dominates the whole Tageba community. Then there are many small mountain spirits around the community. These spirits usually live in the joss house (*tudigong*). At same time, some people think the spirits live in big, old trees. The original forestry had spirits to keep. In practice, each village has a joss house (*shenkan*). When the Hmong cut the trees, build houses, hunt, they will burn joss sticks in the *shenkan*. The purpose is to create safety. In the Chinese New Year and Hmong New Year, the Hmong take the wine, meat, and fruits to feed the joss houses and old trees. They make an offering to the spirits and prayer. In fact, these practices involved some superstitious beliefs, but present the Hmong’s view of the ecology.

Fir is the symbol of *minzhu* success in Hmong culture. The Hmong have a special story about fir cultivation in Tageba. An interesting story that reflects the Hmong’s relationship with firs. There is an upside-down planted fir (*daozaiza*) near the county city. This tree is 25 meters high and 6.7 meters in diameter. It lived more than 200 hundred years. This tree was said to be planted by Mr. Zhang Xiumei who was a Hmong hero. At the end of the Qing dynasty (1732-1855), Zhang led the Maio to fight against the Han who encroached on Hmong territory. But, due to shortage of arm and supply, the Hmong lost to the war many times. Finally, Zhang’s army rested in Taijiang and decided to have a decisive battle with the Han encroachers. In the critical period, Zhang took a fir branch and planted it upside-down in the ground. Then he made a wish that if this fir survived, our revolution would succeed. If it died we would fail. He used the upside-down planted fir to boost his soldiers, morale. It means that even living in difficult condition we cannot lose hope. He encouraged his soldiers to continue fighting with the Han encroachers in order to free the Hmong. After several years this tree still lived, but Zhang’s revolution was unsuccessful. Today, the upside-down planted fir is not just a tree, but is a symbol of the Hmong pursuit of liberty and equality. This story about the tree is popularly known in Hmong society. On February the each year as part of the ancestor worshipping, the Hmong gather under the upside-down planted fir. They make an offering to the tree. Fir forestry is a symbol of wealth among the Hmong. A man’s firs are considered some of his most important assets. Furthermore, the Hmong do not cut young firs while they work in the field.

In short, the Hmong hold several beliefs regarding forestry. Some parts of the forest were considered spirited beings. These included big and old trees. Their music, their stories and their embroidery often depict relationship between human and forest. Their belief in the forest spirits did not prevent them from cutting trees. Instead, they deal with the spirits by appeasing them with rituals and offerings after the cutting.

4. Productive Practice of Tree Cultivation

4.1 Changing Productive Practice

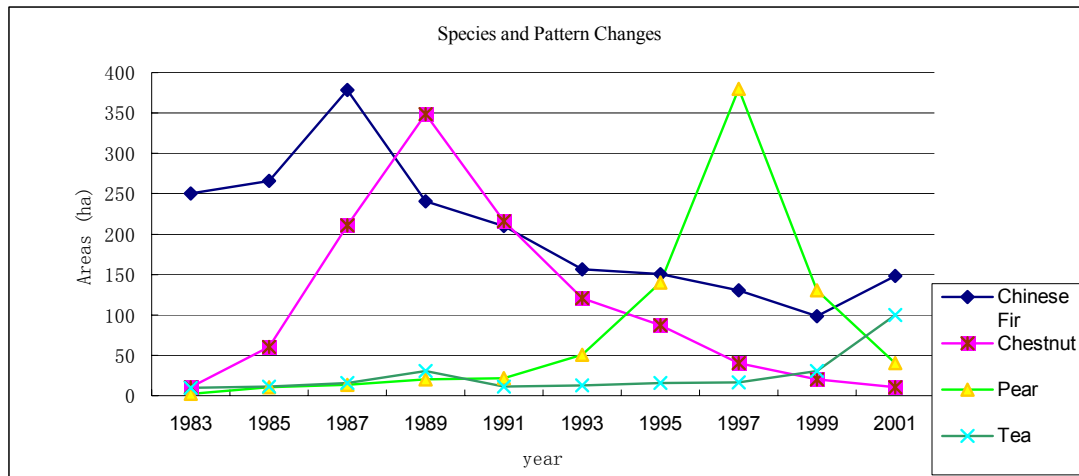
Forest management is the traditional way of life for the Hmong people in Tageba. “*Bai dong*” (planting trees) and “*Dao dong*” (cutting trees) are the main activities of farmers in this community. Farmers often plant trees on mountains. Traditionally, there were three types of

land use in Tageba: paddy fields, forestland, and vegetable gardens. In paddy fields, Hmong farmers usually grew wet rice, rapeseed, wheat, and radish in different seasons. Some wet rice fields were also used to raise fish. Forestland were usually dominated by natural forestry or regenerating forestry. Vegetable gardens were located on hillsides around the village. Farmers grown various crops in the garden, such as, cabbages, radishes, corn, cucumbers, chilies, potatoes, soybeans and sesame, etc. Each household raised several livestock, such as, several pigs, a flock of chickens, and one or two cattle/buffalo. People worked and drank with each other everyday. When some families were busy, they would help each other. Most of the products were for self-consumption or exchange in the community. Farmers would only buy salt and oil from outside. The production pattern was very much a subsistence-oriented system.

After market reform in the mid-1980s, the traditional timber tree management entered a period of degradation in this community. Timber forestry began to decline due to the expansion of fruit tree farms. According to data from the Forest Bureau of Taijiang County, the timber forestry in Tageba declined to 980 mu from 1990 to 1995. Even though 45% of the natural forestry areas still survived, most of these were located in the remotest mountains. Around the highway no. 210, most natural forest areas had been clear logged. And the trend was that farmers changed from timber forest cultivation to grow fruits or other cash crops in order to earn income immediately. Certainly, post-pile houses were no longer distinctly regarded as the symbol of household's rich in Hmong society anymore. Modern raw materials, such as plastic and electricity, replaced fir in tools and furniture. In short, after allocating forestland to the households in Tageba, the timber forests were seriously damaged, and most of the forestland was changed to orchards.

According the information that we obtained from Tageba community and Taijiang County, the land use patterns and main species had changed many times in Tageba during the past decades. In the early periods while the state' timber markets opened in 1985, farmers were more interested in fir cultivation, because fir timber was worth about eight hundred yuan per cubic meter. At the same time, since the county government introduced the Agroforestry Expansion Project (AEP) to Tageba in the late 1980s, planting chestnuts had became popular. Farmers were interested in chestnuts planting because at that time, chestnuts sold at the price of 12 yuan per kg. Also farmers who grew chestnuts had some subsidies from the local government, such as, free seedlings, fertilizers, and technological support. However, the price of chestnuts declined from 10 to 5 yuan per kg after 1990. Farmers had to cut the chestnut trees and became more interested in pear planting in the mid-1990s. Currently, due to the price of pears declined from 10 to 4 yuan per kg as well as the rising tea price, some farmers started tea planting. Also, some farmers started to plant fir again, because fir timber prices had increased during the recent years.

The Changes in Species and Pattern of Trees Cultivation in Tageba



Source: from communist party committee records in Tageba and Taigong Township Forest Stations.

This Figure shows the pattern of land use and species change in Tageba in the past decades. These changes consistently reflect the farmers' response to the market economy. Land use patterns changed to follow the price changes. With the advent of market intervention, farmers grew different trees in order to seek more benefit and faster returns. Now, farmers are more flexible in their selection of market outlets. This has somewhat helped farmers to offset the fluctuations in fruit prices.

4.2 Changing Land Use Patterns

State enterprises and private companies have also been very active in tree planting in Tageba. After 1984 the Taijiang County government encouraged its offices to participate in agroforestry development. Thus, there are now five county offices involving in tree cultivation in Tageba, such as, the Poverty Alleviation Office and the Forest Bureau. They expanded their budget as well as applied the policy of promotion of fruit gardens at the local level. They worked in Tagebe not only to implement agroforestry policy, but also to formulate policy. At the same time, there were four private companies and two state enterprises planting fruit trees in Tageba. A total of about 684 mu of fruit trees (accounting for 35 per cent of fruit tree farms) were organized by these government offices and private companies. They rented land from farmer households and cooperated with farmers. In harvesting seasons, they hired labor from the village. They adopted different forms farm organization based on different conditions. Sharecropping and tree leasing was usually popular for them because it best fitted their conditions.

Variation of Access to Agroforestry Resources in Tageba

Form of Access	Rules	Acreage (ha) of Plots	Cases	
			N	%
Owner-operated	Land cultivated by household of owning family fixed.	39.4	26	36.8%
Land leasing	Number of years land is leased extendable. Rent payable in advance Lessee has absolute use of the land, including trees. If lessee plants pear trees, future harvests will be shared with Landowner when lease term expires.	1.6	21	21.1%
Tree leasing	Lease period is fixed period of lease extendable after each harvests Rent payable in advance Lessee gains absolute access to pear trees Variation: --Lesser maintain rights to cultivate undergrowth --Lesser has limited rights to cultivate undergrowth --Lesser has no more rights, and --Lesser acts as wage labor to work on his leased land	7.5 3.2 1.3 1 2	10 4 2 1 3	6.92% 3.2 % 1.1 % 1.0% 1.6 %
Land sharecropping	Occurs between close relative Tenant gains access to cultivating the land Tenant and landowner share crop yields arbitrarily Tenure of existing perennials remains with landowners	13.5	10	12.5%
Tree sharecropping	Contract binds as long as the trees live Tenant plants fruit-trees or acquires rights to them Tenant maintains fruit cultivation Tenant and landowner share fruit yields equally Land owner keeps rights to cultivate undergrowth Variation: --tenant bears input costs --tenant and landowners share input costs equally	8 6 2	9 7 2	7.4% 5.6% 1.8%
Pawning	Access to land or tree is pledged as security for a debt	2.3	2	2.1%
Borrowing	Access to land is granted without conditions, revocable at any time	10	8	9.3%
Fruit Contracting	Fruit rights belong to absentee owner Owner bears cost for chemical input Contractor provides labor and gets and agreed share of harvests and/or monthly wage	6	10	5.5%
Total case		107.4	95	100

Note: 107.4 ha of land are operated by 95 households in the sample. A household may be involved in more than one form of tenure at the same time.

Source: Households Survey in Tageba community, 2002.

The above table summarizes the various tenurial contracts found in Tageba after agroforestry industrial development. Interpretations of these contracts vary widely. New forms of contracts are developing to accommodate the specific needs and interests of different parties involved in transactions over trees. Interested parties negotiate the conditions of the contracts by referring to the customary law while being influenced by the contemporary economic situation. The traditional tenure transfer type, pawning, has declined as selling tree tenure becomes the chosen means of temporary asset liquidation. The traditional land borrowing and labor aiding has become scarce within clan families; these assets and labor assistance only exists between very close relatives.

4.3 Changing Social Organization and Social Relation

(a) From Clan-based Family to Economic-tied Unit

Traditionally, clanship in the Hmong culture cuts across all locations and encompasses all people with a direct recognizable blood relationship. Members of households usually used the term ‘clan family’ (*jiazu or jiating*) for family members. Hmong people often help each other in agricultural production or other affairs. In fact, the clan connections are a very important element in the Hmong social structure. However, with the agroforestry development, Hmong farmers in Tageba have to reorganized their capital and labor exchange through new forms of negotiation. In order to invest in farms, they have redefined the clan-basis social relationship. New incentives have been created for families to extension and try to build larger and strong households. The new external orientation of family economic activities may also foster alliances and co-operation with the outside. A new economic-tie, “pal family” (*hehouren*), has gradually replaced the tie of being in the same clan-based family. The pal family as a new strategy and organizational form in agroforestry farm is a response to rural development privatization policy and market intervention in Tageba. Several individual households have joined tree cultivation, which included some forms of share investment and pooling of labor. Usually, same or different clan households that are related economic needs came together to invest in fruit-tree cultivation.

(b) Form Exchange Labor to Hired Labor

Agroforestry development in Tageba has led to the weakening of local traditional institutions involving practice of labor exchange. Social relations in Tageba are being redefined, and farm income distribution is becoming more concentrated in the hands of better-off farmers. Fruit-tree cultivation provided higher income than rice cultivation. It also increase the demand for additional household members to engage in off-farm employment (e.g. transport, fruit wholesale), thus increasing labor demands. Fruit tree growing used more labor over a shorter time and coincided with other labor demands. So, the traditional Hmong custom of labor exchange among families became impractical. However, because it was very labor intensive, cultivators had to outlay cash to hire additional laborers from the clan family or other villages to do this work. As a result of all these changes, traditional labor exchange and the custom of helping each other have become unpopular in Tageba.

5. Discursive practices of tree cultivation

What is a tree? People based upon different social, political, and cultural context interpret tree from different ways and meanings. Some may interpret tree from the botanical characteristics of tree as very tall, and having large or small leaves. Others may define tree as timber, fruit, and firewood. There are various discursive practices about tree cultivation that are manipulated by individuals’ interests and self-consciousness.

5.1 Official Discourse of tree cultivation

In practice, since 1985, the county government has adjusted forest policies in order to promote rural economic growth. The economists in Taijiang have argued for a new policy encouraging regional specialization of forest industry. Since 1990, the County government has performed well its task of identifying “the main problems connected with the fruit tree industry” and recommended “ways to improve the economic conditions of the local population”. The professed aim of the county’s development plans is to improve the livelihood of peasants by raising output and diversifying and intensifying production. So government has adopted the fruit tree industry since the 1980s.

The agroforestry development project has not only greened the landscape, but also increased farmers' incomes. It has reduced poverty and decreased farmers' deforestation. The government encouraged the local people to plant trees on their own farms. It was hoped that the Taijiang's economy would be developed and forests would be better restored and conserved (a government worker in Taijiang County, 2002).

From the Township government's point of view, the concept of agroforestry is the advantage 'thing' that increase forest productivity and improve farmers' incomes. They thought the agroforestry development was "an important strategy that increased farmers' income, adjusted rural production structures, and developed the rural economy. Developing agroforestry was a significant measure that made farmers 'get rich quickly' and increased tax revenues. It was not only necessary for the industrial development of mountain regions, but was also needed for social development. Agroforestry development has also been regarded as an employment creator for local people.

5.2 Local Discourse of tree cultivation

Farmers growing trees also have their own needs and expectations. While we were reviewing villagers in Tageba, more than 90 per cent of the farmers told us that their purposes in growing trees was to earn money. But under careful investigation, it became obvious that old men, the younger generation, and women have different interpretations regarding fruit tree cultivation. The younger generations mostly think that growing trees is for the purpose of making money immediately. As a young farmer described: "I do not know many growing techniques of pear cultivation, but I have 2 mu of pear trees because growing them can earn much more money than growing rice, vegetable, or firs."

However, the older generations have interpreted fruit tree growing in another way. As an old man explained: "Fruit tree development contributed many opportunities and made money for us. I work on the farm everyday. I have fruits for eating. Also I use fruits for my grandson to play with while he cries. But growing fruit trees has also destroyed many things. For example, now when you go to the mountains to find traditional herbal medicine, it is very difficult to find. Fruit trees plantation has cleared many species of herb away. Ten years ago around our village, there were many special varieties of waxberries, but now they can only be found on remote mountains, because everywhere else is fruit trees." Women also regarded fruit tree cultivation differently. While some were similar to men in thinking about making a lot of money; some thought of it as "a waste of time and labor." Several women in Dade village thought "growing fruit trees actually cannot make money. Growing fruit trees needs massive inputs like more fertilizers and pesticides; we should work hard on the farm instead of growing fruit trees. In the harvesting season I sell fruits everyday. Managing the fruit trees and selling fruit waste my time. Growing vegetables or raising pigs can make more money than trees cultivation. Tree growing creates too much work for us." Consequently, farmers have abandoned their traditional fir cultivation, and diversified their crop selection. The Hmong farmers now seem not very interested in fir cultivation. There are many drives and desires involved in tree cultivation.

Fifteen to twenty years ago, you would not see anybody grown oranges on their own. But now we produce these crops everywhere. Fir we also grow, but no like before. We just grow a few firs on barren mountains. Now when building houses, we can use pine or other materials. The problem is that you must have enough money (a farmer in Dade village, 2002).

If you ask me why I invest in fruit trees, well, it is not easy to give an answer... the one who wants to be successful must behave commercially. In former times we were satisfied when we had enough to eat. We were happy when life was stable and peaceful but today we need more. (a farmer in Pingqiao village).

Farmers interpret fruit tree cultivation as meeting economic needs. The tree growing, for all practical purposes, has replaced households as the principal source of cash for subsistence and other forms of consumption. As a woman told us: "This [indicating her dress]; this [her shoes]; this [her earrings]; this [miming the food she put into her mouth]; and this [clutching her breast to indicate the food she fed her children]— all come from tree cultivation! That's

why I work here everyday!” Indeed, villagers explained to us that when the production cost for rice per mu was about 80 yuan under the collective, now it had dropped to about 50 yuan, because every household tried to make input savings and required the maximal output. In addition, villagers also pointed out the reason why they changed from ground crop use to have more interest in growing fruit-trees.

Agroforestry development in Tageba seem dozen of development narratives or discursive practices in which different meanings are mobilized among women, elders, youth, and officers. The market economy led to resource meaning changes in Hmong society. Hmong farmers began to interpret subsistence and market in different ways. Depend upon different context with market and resources, farmers gave different meanings on the tree cultivation. Someone interpreted timber tree good while other thought it wasted time. Someone interpreted fruit faster make money while other thought it damaged traditional herbal medicine.

CONCLUSION

This study focuses on changes in fruit based agroforestry practice in Tageba Hmong community in Guizhou Province, China. The changing practices of tree cultivation show the Hmong responses to the economic transformation in rural China. The major findings of the study as following:

In responding to market, the Hmong farmers have changed the productive practice of tree cultivation. Since 1979 China has shifted from planned to market economy, the economic structure and social relations have changed in Hmong society. In order to meet their sustainable livelihood and make a better livelihood under the market condition, the Hmong farmers in Tageba have adjusted their behavior of tree cultivation through changing and diversifying their land use, reorganizing their labor, and reconstructing their social relation. The traditional land use patterns have been widely replaced by the economic incentive. This has resulted in an increase of land pressure and more dynamic land use. In the labor distribution practice, the traditional form of labor exchange within the Hmong communities has been replaced by hired labor. Kinship ties have felt the impact of growing individualism, and new alignments were developed in the form of associations based on economic ties.

The changing structure creates new meanings for resource. Since 1979 the Hmong farmers have obtained more free land use rights of agricultural production. The capricious market has regulated their agricultural activities. However, the market as a process of ‘hybridization’ has given rise to a pluralization of economic and cultural practices. The market economy introduced new needs and aspirations to Hmong community. Nowadays, the role and value of forest changed. The cultivative values are strongly associated with market demand. The customary fir planting became a matter of no great importance. The wood houses are no longer regarded as a symbol of the rich. The fir forestry is less associated with prosperity and Hmong identity. Although timber forests were extensive in some areas, the main forest value was usually perceived to be economic, in the form of the production of a raw material for industry. With the growth of commodity production, earning money has become the center of social life in Hmong society. For individual farmers have regard forest more like a source of cash income, and looked upon traditional forest management with economic calculation. Forest management became essentially a technical exercise, geared to clear goals and based on economic values. They are concerned more about their own interests than about the interests of their families and community.

In responding to market and development policy the Hmong farmers have rationalized their forest management. their attitudes, perceptions and motivation in forest management

have changed essentially under the market-oriented development. Farmers now look to forest for more than the production of wood, and demands have increased for such cash income as recreation and nature conservation. These shifts in values have been conceptualized in the term post-industrial forest, which recognizes there are demands for other forest goods and services apart from timber production. However, it is possible that the changing role and value of forest in developed market economy have been facilitated by the exploitation of forests elsewhere. In practice, farmers have their own needs as well as ideal types in tree cultivation as Scott calls 'safety-first ethics.' The Hmong farmers have mobilized forest strategies to make the best use of the minimal landholding allotted to them. They have expanded fruit-based agroforestry or have adapted other strategies to intensify their livelihood.

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