

CHAPTER III

HISTORICAL DEVELOPMENT AND AGROFORESTRY PRACTICE IN STUDY AREA

Taijiang County has tremendously transformed in the past decades, particular after the market reform in the 1980s. The market economy has introduced new information to this forest-based county. Miao farmers have been forced to change their traditional lifestyle and practice under market condition. The fruit trees industrial plantation replaces tradition of timber-based cultivation. This chapter reviews the transition of Taijiang County in the historical context. Indeed, in order to realize the linkage between Miao forest management and market as well as to understand the transformation of this Miao region under the market economy, a fruit-tree industrial region, Tageba, will be introduced. Thus, rural development and forests management in Taijiang County will be presented first. Then, The history of agroforestry development in Taijiang County and Tageba community will be described. The ecological setting, socioeconomic background, cultural perspectives of tree cultivation in the Tageba community will be expressed. Also the roles and networks of the local market will be addressed. Finally, the history of tree cultivation and agroforestry extension in Tageba will be presented.

3.1 The Mountain County and Ethnic Region of Taijiang in Transformation

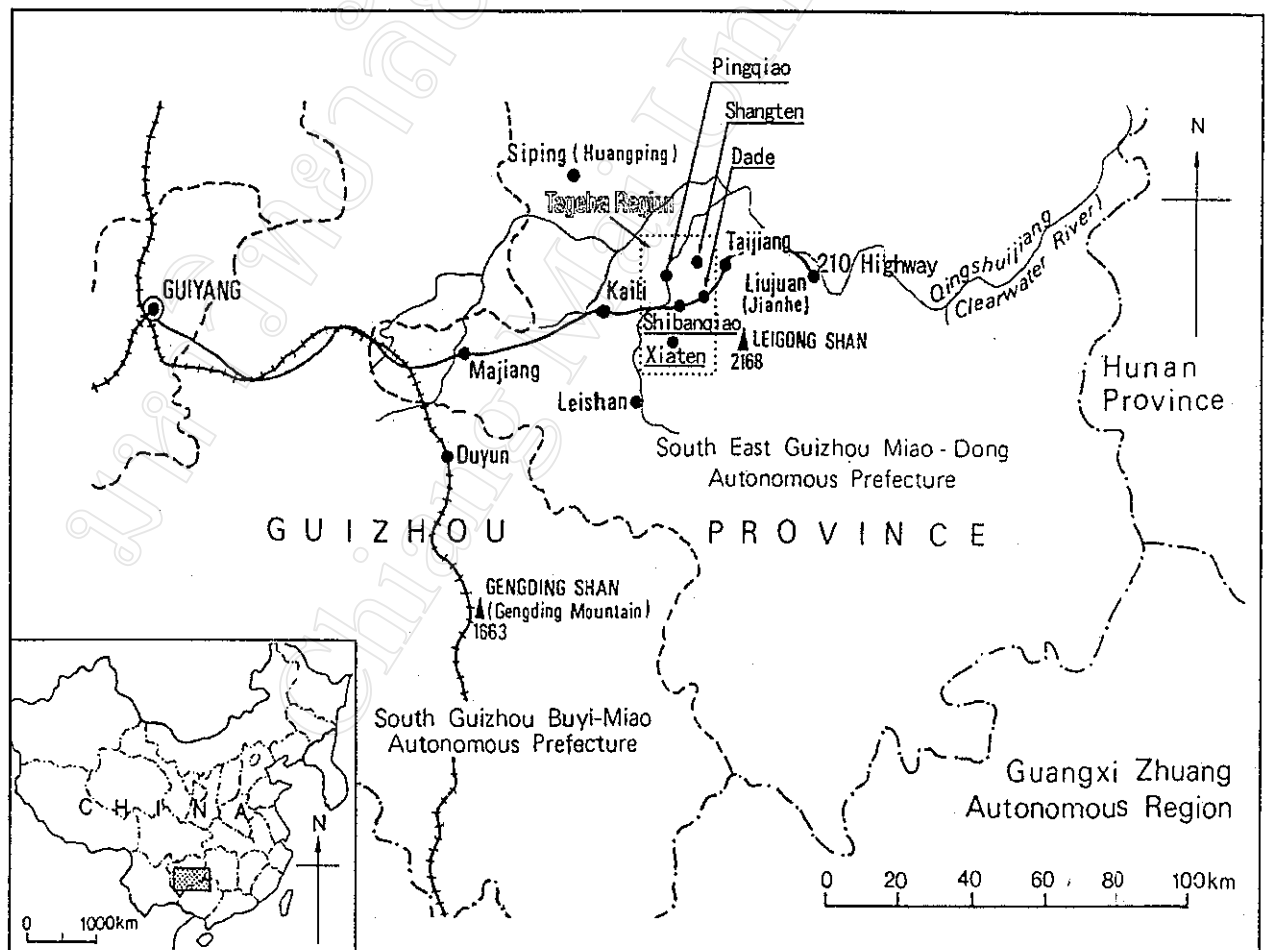
3.1.1 Ecological Setting of Taijiang County

Taijiang County is located approximately at longitude 108°06'-30' East and latitude 26°24' - 53' North in eastern Guizhou (see **Map 3-1**). Its total area is 120,600 hectares consisting of about 77,288 hectares of forestland. It accounts for 64 per cent of the total land. There are 1,363 hectares of economic forestry (fruit-trees and cash crops) in this county. According to the 5th State Population Survey in 2000, the population of Taijiang is 142,000. However, on account of its remote location and forest environment, Taijiang is recognized as a center of Miao people residence in China as well as a major county for forestry production in Guizhou province.

Taijiang is a typical mountain county in Guizhou province. Around 95% of the land is mountainous. Unlike the other counties, Taijiang does not have the classic karsts landscape of eroded limestone mounds for which Guizhou is famous, but instead a rumpled mass of classic

folded mountains incised by deep river valleys. The vertical tendency of the terrain has always made agriculture difficult, but is excellent for forest production. The region has historically been a remote hinterland to the downstream civilizations in Hunan and Guangxi, a refuge for those who refused to assimilate as the Chinese Han culture began to predominate in the valleys and along the waterways of southern China. Chinese Han migration into the region did occur, especially during the eighteenth and nineteenth centuries, along the two primary waterways draining the region, the Qingshui and Duliu Rivers. The trading ports that arose along these rivers became Han Chinese enclaves, while the rest of the region was dominated by tribal people, commonly referred to by the Chinese as Miao, “sprouts” or uncivilized.

Map 3-1. Map of Taijiang County and Location of Research Sites



Taijiang County is a center of population for Miao people residing in China. It is located in the center of Qiangdongnan Autonomous Prefecture of Miao and Dong Ethnic Minorities. In this county 97 per cent of the population is Miao. Concerning the Miao in Taijiang, Zhang

(1999) observes, “the present cultural pattern was distilled in the Sung dynasty”(960-1279 AD). The Miao has many varieties of oral culture, such as, the world opening epic, folk songs, folk stories, etc. The Miao people have maintained traditional Festivals that show the Miao people’s religious beliefs, morals, art and other cultural practice, such as, ‘Nou Ge Liang’ (Sister’s Festival), ‘Qia Yang Worg’ (Dragon Boat Festival) and so on. Resource management in this area exists as a well-known customary law called “Three hundred¹.” The Miao people in this area have also maintained some distinctive customs, for example, clan, kinship relations. Also, marriage is still carried out according to the *Yon Fang* style in which young people through singing songs seek marriage and faithful love.

Taijiang was identified an “impoverished county” (*pinkunxian*)² by the central government in 1985. In 2001, its GDP was 167 million yuan. The accounts of the county government had only 150 million yuan and it produced only 47,500 tons of grains per year. There were 43,000 people who were identified as poor people who have not enough food to eat. Thus, many economic development projects aimed at poverty alleviation were introduced to this county in the past two decades, such as planting fruit trees, raising pigs, and growing vegetables.

Taijiang’s agricultural production has pursued economic growth and increased rapidly after 1990. The most comprehensive measure of agricultural production is the GVAO (Gross Value of Agricultural Output), which includes crops, animal husbandry, forestry, fisheries, and subsidiary activities. According to the data from the county’s Agriculture Bureau in 2001, the whole county planted 1,692 hectare of fruit-trees, and there are 14,507 people sell labor in city per year.

3.1.2 Rural Development in Taijiang

The Rural development of Taijiang went through a ‘stagnant era’ in the collective period (1949-1978), because at that time agricultural production always followed state plans. Land and forestry belonged to the people’s commune, meaning that everybody equally shared food and labor in the commune. Farmers were laborer who worked every day on the collective farm.

¹ **Three Hundred** (*San gelibai*): Miao communities have a traditional custom law. It’s name comes from it’s favored punishment: those who go against this law have to share one hundred jin of rice, one hundred jin of meats, and hundred jin of wine, with villagers.

² **Impoverished County** (*pinkunxian*): defined by the Chinese government as those with an average annual per capita net income lower than 15³ **Three Hundred** (*San gelibai*): Miao communities have a traditional custom law. It’s name comes from it’s favored punishment: those who go against this law have to share one hundred jin of rice, one hundred jin of meats, and hundred jin of wine, with villagers.

³ **Impoverished County** (*pinkunxian*): defined by the Chinese government as those with an average annual per capita net income lower than 0 Yuan and less than 400 kg of foodstuffs which, in 1985, totaled 699 counties.

Private activities were disallowed and punished. The main role of agriculture was producing grain self-sufficiency. In fact, as Wu (2000) describes, “the rural development in the collective period the political struggle was seen as more important than economic development.”

However, a really rural development of Taijiang commenced from the 1980s (Si, 1994). Following the state’s rural reform policy, the county’s developers implemented a series of reforms. A major reform was to adjust the agricultural policy of self-sufficiency toward commercial production. Thus, “Get Rich Quickly” became a popular slogan used in rural development theory. In September 1983, the County Communist Party Committee and the County Government jointly issued a “Circular for Aiding Poor Villages” which identified Taijiang as an economically underdeveloped county due to its natural conditions and poor infrastructure. This circular said that alleviation of poverty was still necessary. It described how in remote villages, farmers were still poor and their problems of food and clothing shortage had yet to be solved properly.

In practice, under the ideology of “Get Rich Quickly”, some households due to their personal skill, social relationships and capital, became rich while other households were more unfortunate. This gave rise to anxiety about the possible polarization of society between the poor and the rich. Therefore, after the 1990s, how to reduce poverty and balance social equity was an important issue in Taijiang’s economic reform and development. In order to avoid the polarization of society, the county government implemented a series of activities to reduce poverty. It encouraged the development of a network for social relief in a ‘help-the-poor’ campaign in which it had compiled a registry of the needy and issued them with certificates entitling them to preferential consideration in regard to loans and access to means of production, reduction in medical expenses and free education for their children. The government also gave some technological assistance to farmers in order to help them to immediately increase their domestic sidelines, such as, fruit tree growing and pig raising technology.

The government urged the farmers to take “positive and effective measures to shake off poverty, improve productive conditions, raise productive capacity and develop commodity production.” In 1990, in order to co-ordinate and supervise the economic development of poor villages, the County government set up the Economic Development Leading Group with administrative offices in the county office. Officials at the township level had the duty of identifying and organizing appropriate forms of intervention in poor villages and households.

In the same year, the county's Seventh Six Year Plan of County Economic Development (1990-1995) clearly defined two steps for developing poor villages: first, providing basic needs and generating a self-development capacity; second, helping targeted 'poor villages or households' to set up commodity production bases that rely on local resources and conditions.

3.1.3 Historical Development of Forest-based Economy in Taijiang

Taijiang is a forest-dependent county. Its forest cover rate is 50.8% and its forest stocks are 2.81 million M³ in 2000. Natural forests in Taijiang can be sorted into evergreen broadleaf forests, tropical rain forests, seasonal tropical rain forests, dark alpine conifer forests, conifer and broad-leaved mixture forests. However, recently many man-made forests have emerged on the barren mountains and natural forests have been gradually depleted.

People in this county have a long history of forest management. According to historical records from the county government, four hundred years ago, people in this county knew how to manage lacquer trees and used raw lacquer (extracted from lacquer trees) to make lacquerware (woodenware painted with lacquer). During the Tang Dynasty, people began to plant tung trees and tung oil was an important product for the traditional barter trade with other counties (Wu, 1997). By 1739, there were already logging activities and exports of wood to Hunan and Guangxi provinces. During the Ming dynasty (1368-1644), farmers planted fir in the watersheds of the Qingshui River (fir is a popular tree widely used in construction and furniture-building in south China). Large log rafts could be seen floating down the Qingshui River to be processed at mills in the eastern China. In the Qing dynasty (1644-1911), Taijiang's fir timber was sold in places as far away as central China (which the middle and lower reaches of the Yellow River flow through). In the Qing dynasty, also there were some people growing plums and peaches around their houses.

Taijiang is a key area of Chinese fir production in Guizhou province. Fir cultivation is a traditional practice in this county. Through most of its long history, forest development in this county was epitomized by timber-based production. Chinese fir timbers were the major products in this area. Traditionally, the Miao people have grown Chinese fir and mason pine (also called horsetail pine) on their farms. Fir is a part of Miao identity. One is that the Miao people in this county live in fir post-pile houses. Miao people use fir wood everyday, such as to make tools, furnish houses, and so on. In this county forestry provides people with timber, wooden panels, fuel wood, fodder, herb medicines, fruits, tea, pastures and other necessities

for their livelihood. Forest cultivation is the main agricultural production activity and source of income in this county. Before the logging ban in 1998, the county's 80 % tax revenues and 60 % of local incomes came from logging or other forest activities. The traditional practice of community forestry in this county has laid a foundation for decentralization and privatization in the forestry sector.

Along with the state's economic reforms, especially the land reforms of the early 1980s, the local government and the farmers in this county accelerated the pace of privatization of forest management after 1983. The county government took a series of actions such as "stabilizing forestland tenure," "canceling state control timber price and quota of logging," "opening the timber market", "encouraging private sector participation in reforestation by land leasing and developing the forest product market" etc. These policies further mobilized farmers and those in the private sectors to invest in forestry, and to contribute to forest conservation. In practice, Forest resource management and forest product utilization was in rapid progress in the end 1980s. For instance, according to government statistic from 1985 to 1998, the all reforestation areas were 1 million mu, which was more than twice of the area of 1980. Among the 1 million mu, 0.6 million mu was fir, invested by individual farmers or households; 0.4 million mu was invested jointly by individual households and collective production teams; and only 0.5 million mu was invested by state-owned enterprises. However, more and more rural communities were involved in forest cultivation. Now the forests had become their "own" assets, directly related to their economic benefit, they managed it very carefully and with patience.

Recently, with the increase in rural population and environmental problems, the forests have not only been recognized as providing timber for economic development, but also recognized to protect the environment, and to provide subsistence needs for local people. After 1998, the county government implemented the NFPP (Natural Forest Protection Program) and declared fir logging prohibited. So the county government's tax revenues as well as farmer's incomes decreased sharply. Many workers who were employees in state forest enterprises lost their jobs; many timber factories collapsed. In fact, in order to solve these problems of revenues decrease as well as worker unemployment, the county government was trying to create some new ways to develop their revenues. At the same time, in the recent years, with the price of timber declining, farmers had started to change their patterns of forest management and cultivation. So both the county government as well as farmers adopted a

fruit-tree based industrial scheme with strong motivation. Many exotic species of fruit-trees have been introduced in response to market demands and the NFPP policy. For example, pears, loquats, oranges, and waxberries, are grown everywhere. Growing fruit trees has become quite common and agroforestry has become a valuable activity for making money. Approximately 90 per cent of the farmers in this County are growing fruit-trees. Currently, large-scale fruit farm households have increased. Consequently, Miao farmers in Taijiang County have adapted, gradually changing their traditional Chinese fir cultivation to more commercialized fruit-trees cultivation.

3.1.4 Development of Agroforestry in Taijiang

As already mentioned above, in the collective period, fruit tree cultivation was very restricted. Agricultural production in Taijiang was predominantly staple foods (in this area, grains, maize and corns). Fruit tree growing was discouraged during the collective period. Forest production centered on timber. Starting in the mid-1980s, following economic reforms (especially the liberalization of external trade and the legalization of household land use rights), the county government has encouraged the diversification of agricultural production. For the forest/tree-orientated areas, this has lead to a strategy of fruit tree industry occurring. The increasing consumption of fresh fruits has boosted the fruit industrial development in the 1990s. According to the 2001 report of China's Statistics Bureau in 2000, China as a whole consumed a total of 104 million tons of fruits, and an average person's consumption of fruits were 760 kg. The growth rate of people consumed fruits was 6.5% per year in the 1990s in China. The data from Taijiang County government identified about 60 per cent of fruits in the Taijiang regional market were imported from the outside. In this county people consumed about 2 million kg of fruits per year. The domestic market can be expected to increase following the growing income of the urban middle class, and the international market is yet to be exploited.

In Taijiang County industrial fruit-tree cultivation started in 1983. Due to a the small amount of tax which the central government had approved to be collected, the local government had to pay more attention to economic expansion in order to have enough funds to pay extra wages and annual monetary awards to their workers, and make an economic profit. For instance, in 1983, the total budget to pay worker's wages was 220 million yuan, but the province only supplied 180 million yuan, so the county government was left to earn the other 40 million yuan for themselves. This crisis of finances forced the local government to

negotiate for forest development which was able to expand their sources of taxation. As a result, the government decided to adjust their traditional timber-based financial structure in which adopted diverse forest production. So the fruit tree industrial cultivation was adopted for the whole of this county for which it was regarded a “good” strategy of rural economic development in the late 1980s and early 1990s (Si, 1994).

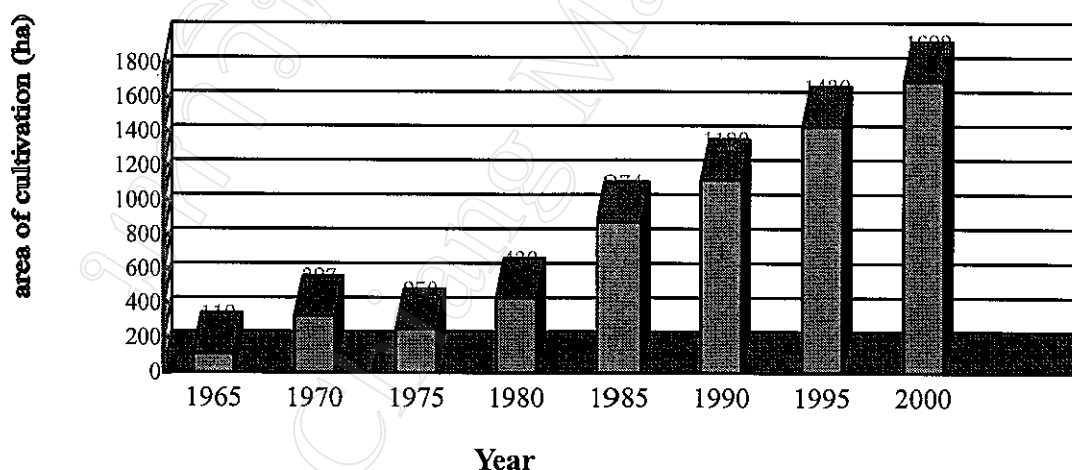
In order to mobilize households to increase investment in forest planting and increase the county’s agricultural revenue, the county government had to design its own economic reform program. This was known as the County Economic Development Program (CEDP), and published the “first document,” in which the county adopted industrial plantation in 1983. In the same year, the provincial government defined Taijiang as a “forest county.” Following this ideal, the county government announced, “Dependence on the Forest Carry Taijiang’s Economic Development.” After that, the industrial plantation was launched all over the whole county, some individual farms and seeding nurseries were constructed, and exotic species were introduced from other provinces, such as, oranges from Hunan province. Similarly, in 1984, the county government developed the “Structural Adjustment Program (SAP)”. This project aimed at “dealing with serious structural problems in rural economic development.” It worked on the assumption that “the structure of agricultural products is key issue that boost economic development.” This project also regarded that “The potential of Taijiang’s development is on the mountains. In mountain exploitation like the tree production, to adopt market demands the forest production means not only to develop the traditional timber trees, but also need products economic trees”(Wu, 1994).

In 1985, the regional price of fruit as government control was abolished, and farmers and businesses received rights to engage in agricultural product trade freely in both local and urban markets. Even after the local government tried to encourage the farmers to participate in tree cultivation, shortage of revenue forced the county government to apply for a grant from the Poverty Alleviation Fund (PAF) from the provincial or central government. An MD-PAP (Mountain Development and Poverty Alleviation Program) based on Taijiang being a ‘poverty county’ was agreed upon with the provincial government in 1988. Under this program, more than 14 hectares of chestnuts were planted in Taijiang County.

Moreover, in September 1993, the government issued the Cash Crops Act, in which the private sector was allowed to participate in the purchasing, processing and exporting of the main six crops grown by smallholders: pears, green tea, bamboo, loquat, waxberry and

cabbage. This Act has improved the profitability of growing cash crops in formerly remote villages. Generally, patterns of tree planting tended towards cultivation of fruit trees after 1992. Agriculture also began to utilize fertilizers and other industrial inputs. There were low interest loans provided out of county agricultural bank. Usually, if farmers planted one-mu of trees they received a 100 yuan no-interest loan and a 150 yuan low-interest loan from agricultural banks. According to the government financial report, 1983--1998, Taijiang's government used low-interest loans from the PAF totaling 11 million yuan to support fruit-tree cultivation. In this period, the government also trained about 820 technicians and managers, and established 115 large fruit-tree farms. The whole county planted 1,364 hectares of apple farms, 680 hectares of chestnuts, 224 hectares of plums, and 105 hectares of oranges. Each year, this county harvested 18 thousand kg of apples, 100 thousand kg of pears, 50 thousand kg of chestnuts, 5,000 kg or oranges, 5,000 kg of grapes and 1,000 kg of waxberries (Si, 1994). At the end of 2000, this county total planted 1,692 hectares of fruit trees (see **Figure 3-1**).

Figure 3-1. The Changes of Agroforestry Areas in Taijiang County

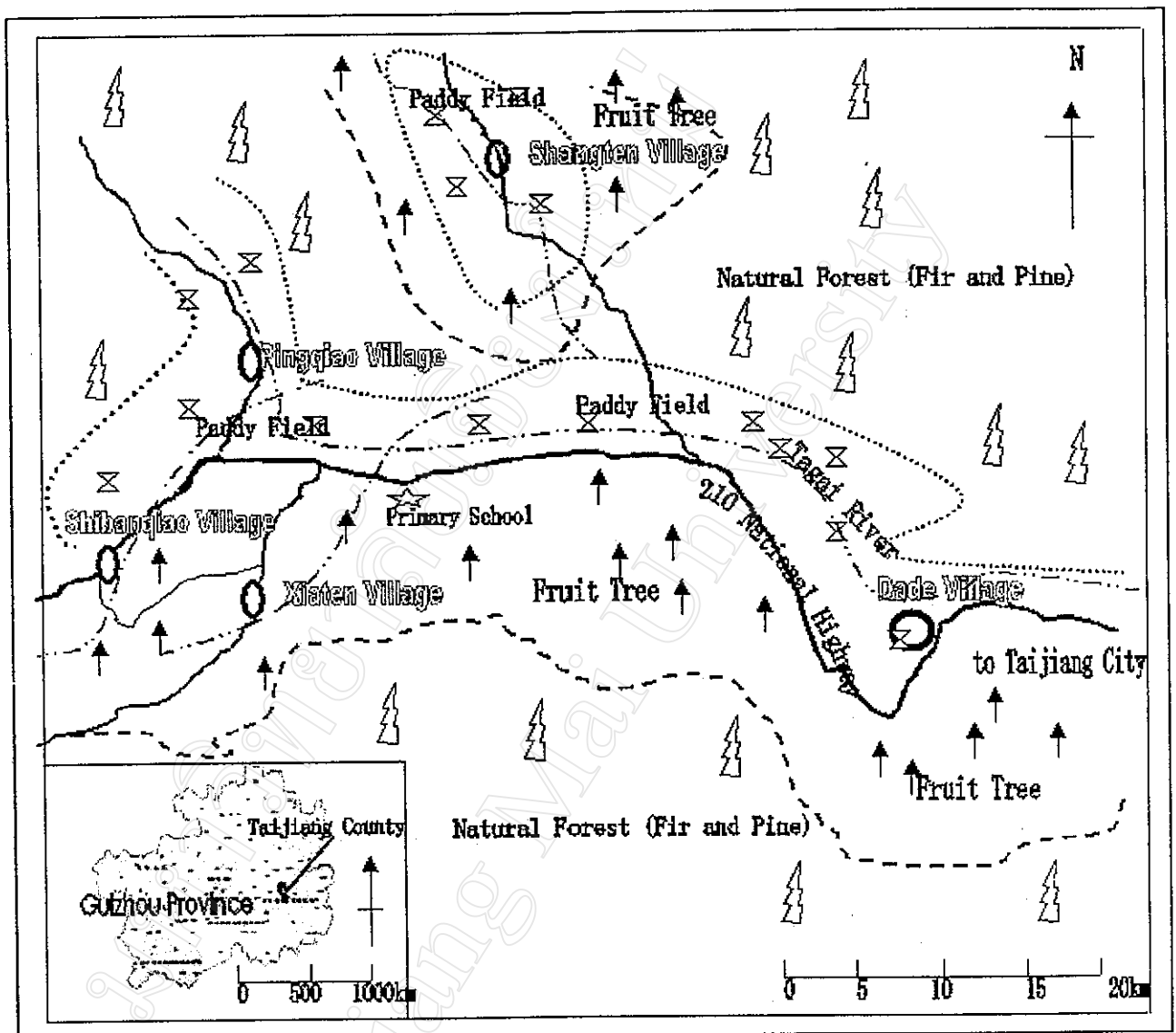


Source: Taijiang County's Historical Record of Forest, 2000

3.2 The Miao in Tageba and Their Traditional Land Use Practice

Tageba community which was choose to be my study site, is located in the East of Taijang County. The Miao 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 percent of the populations are Miao (see **Map 3-2**).

Map 3-2. Map of Tageba Community and Land-use Pattern



The Tageba Communist Party Committee administers the five villages' common affairs, such as, policy implementation, project introduction, and tax collecting. The No.210 national highway from Shanghai to Kunming passes Dade, Shibaoqiao, and Pingqiao villages. Ideally the members of one clan settle in the same village. In practice, this is often not the case, and members of two or more clans frequently settle in the same village. According to the Miao, this facilitates marriage since girls must marry out of their father's clan, so the presence of two or more clans in the same or neighboring villages allows young couples to meet and courting to take place. Thereby, there are various linkages among the five natural villages in Tageba, such as, marriage, relatives, and common event organization. Each of the village there have different characteristics (see Table 3-1).

Table 3-1. Differentiation among Five Natural Villages in Tageba

Items	Shangten village	Xiaten Village	Shibanqiao Village	Dade Village	Pingqiao Village
Distance of highway	9 km	5 km	1km	0km	0.5km
Households	62	43	51	93	26
Population	492	370	323	668	228
Land (mu)	645	688	821	852	639
Forestry areas (mu)	239	209	143	213	253
Orchard (mu)	41	68	348	359	7
Average Incomees (yuan)	3573.9	4348.5	4337.0	5628.5	5102.8

Source: data from Tageba Community Committee, and Forest Station of Taijing, 2002.

3.2.1 Ecological Features and Social Change

Tageba is located between the altitudes of 900 and 1,200 meters, with daily temperatures ranging between 16 and 25 centigrade. The 10-year average (1980-1990) of annual rainfall is 2,124 mm. The subtropical climate makes this area suitable for growing crops and forestry. Historically, Tageba have been relatively prosperous forest. Farmers areas have a long history of forest management, especially Chinese fir and pine cultivation. 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. In this community, there were wet-paddy fields consisting of 472 mu and dry fields consisting of 150 mu. Recently, rice is no longer grown on dry land, and the former paddy fields along the river have been planted with cash crops.

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 (see Table 3-2). Historically, in the five villages, forest products were a major source of income. In some households, the proportion of forest incomes was even higher than 60%. But tree cultivation was traditionally based on timber production systems not fruit production. Household economic structure was very

simple. The main sources of income were collected from timber and non-timber forest products. 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.

Table 3-2. Number of Plots and Land-use Type in the Five Villages of Tageba

Land-use type	Unit: mu					
	Shangten	Xiaten	Shibanqiao	Dade	Pingqiao	Total
Paddy Field	121	142	99	150	110	622
Chinese Fir	156	130	30	125	116	557
Mason Pine	61	74	113	85	128	461
Vegetable Darden	20	34	18	32	26	130
Fuel Wood	13	5		3	9	30
Chestnut		13	33	62		108
Pear	18	44	253	244	2	561
Other Fruit-trees	13	11	62	53	5	144
Bare Mountain*	243	235	213	98	243	1032
Total	645	688	821	852	639	3645

Source: Tageba Party Committee records, Taigong Township Forest Station's reports, and informants interview, 2002.

* "Bare mountain" indicates the areas in which the regeneration forest coverage rates no more than 0.4 and with the main components being shrubs and small trees.

Before 1949, landlords organized Tageba's agricultural production. We know a little about this from one elder who told me about his grandfather who was a landlord in this region. "My grandfather organized about 100 mu of land before 1949. More than half villagers were hired labor for my family". 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.

However, with state adopted the “open door” and HCRS policies in 1978, the land reform also was implemented in Tageba. In August 1980, a work team came to Tageba. The task of this team was to implement the household responsibility system. Under work team supervision, Tageba had its “second liberation” and first land reform. Paddy fields were distributed to individual households. First, based on the output of the last three years, the output of all paddy fields was determined; next, the village population to ascertain the output of each household divided the total output, and finally, the size of plot allocated to each household was determined by matching household output to plot output. In this way, part of the village farmland was allocated to individual households with an area proportional to the number of family members to making living in 1980. At that time, the per capita allocation of wet-paddy land amounted to around 2.4 mu.

In addition, in 1984, forestlands was also allocated to individual households. An average person generally became responsible for 2.3 mu of forestland and got 3.4 mu of Freehold Mountain in this year. All brigade-owned animals were sold to individual households according to their needs and buying power. At begin of the land reform per person owned land was equal. In practice, following land reforms and trade liberation, private farms, whose owners were more motivated to work hard in production, gradually emerged in Tageba. But in the long run, there were failures in some aspects. After distribution in 1984, land ownership in this community had never been adjusted. But the population of households has changed over time through death, marriage and birth. So, the land owned by each person and household became more unequal. Some households have accumulated more and some households less.

Some households have accumulated good quality land while others have accumulated low fertility plots. For instance, in 1998, village statistics show that 30% of the 80 households in the village owned land less than 1 mu per person, especially among households who separated from the mother after marriage. The unequal access to land became a major social problem that affect agricultural production as well as economic development.

In Tageba, wet-rice was the main crop, together with a very small amount of corn and wheat. However, at least one-fourth of the households in the villages were short of grain for two to three months in the year, and the poorest households were short for three to four months a year. I surveyed eight households representing a range of incomes and embracing both the richest and poorest households. It is found that half of the households had less than 257 kg of rice per capita for consumption. Recently, near the highway, wet-rice, fishing, fruit-tree are the main activities. Most of the land had been privatized *de facto*, if not *de jure*. In the uplands, there were larger private holdings and considerable grazing land which was still managed communally, but most households controlled their own crop plots. There are now more than 10 restaurants established along the No.210 highway. Since 1984, the five already have electricity, and telephone and TV lines were installed in 1998.

3.2.2 Cultural Perspective of Tree Cultivation

Miao people in Tageba have a long history of forest management. The Miao farmers have accumulated many experiences and knowledge about tree cultivation. For example, the Miao never cut maple and old trees as these are considered "friends of the ancestors." The Miao consider trees as equal to human. Children cannot climb old tree for they believe that this goes against will of the spirits. The Miao believe that the sickness or death will occur, if people cut or climb old trees. Miao in Tageba consider that everything on the earth comes from the fog. There is one well know Miao 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." Miao think that the ancestor of humans is *Jiangyang* who was formed by the fog. They believe that a maple first emerged in the fog, and then the ancestor of human, *Jiangyang*, appeared as an image on the maple tree. Obviously the Miao think fog and tree are the source of world.

The Miao 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 Miao 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 *jiangyang* was born, and he was regarded as the ancestor of human in Miao society. Even this myth has no scientific evidence, but it presents a frugal materialism’s viewpoint that Miao people cognize nature as well as world. In Miao 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 Miao in Tageba prohibit people cutting maples, especially the pregnant women.

The Miao in Tageba believe that everything has an 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 Miao 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 Miao New Year, the Miao take the wine, meat, and fruits to feed the joss houses and old trees. They make on offering to the spirits and prayer. In fact, these practices involved some superstitious beliefs, but present the Miao’s view of the ecology.

Miao people in Tageba still maintain the primal worship of totem. They embroider some trees, flowers, birds, insects, and fish on the seams of their shirts, caps, bags, and clothing.

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Each picture represents an identity story or historical story of the Miao. This practice presents their view of the world as well as their understandings of nature. In their perceptions, humans and forestry are part of nature. Trees, water, and soil are elemental resources of human living. They think the trees are the “owners” of mountains, people are just guests. The relation between the forests and people is like the relation between water and boats. They cannot be separated from each other.

The *paidong* as planting tree in Miao language is main activities in Tageba. The most respected men in Miao communities are the planters. The Miao in Tageba spent about seventy-six days a year planting. Each year they clear forest or secondary bush off land in order to prepare the new fields to plant tree in spring. Fir seeds are planted in the remote mountains as the first rains fall in January or early March. Men mark holes in the ground with a dibbling stick while women follow behind dropping one to two seeds in each hole. They know what species are better acclimatized in different areas; they themselves have extensive techniques and knowledge on plantation in many different situations. Besides using timber for their houses, the Miao make use of various tree parts for other purposes. Trunk are used for the piles of house, bark is used for covering house. Treetops are used to build the sheds of animals. They know the best seasons for tree planting and cutting. Traditionally, a popular practice is that when a daughter or son is born, the parent will plant one to two mu of firs or pines in the mountains. They call “Posterity Forests”(zhishunlin), meaning that these forests can be used to disburse their daughter’s marriage or support their son when he marries a wife. In this area firs or pines can grow to big trees in time for their child’s marriage after 18 years. Parents can cut these trees earning money to pay for their children wedding.

Fir is the symbol of *minzhu* success in Miao culture. The Miao have a special story about fir cultivation in Tageba. An interesting story that reflects the Miao’s relationship with firs. There is an upside-down panted fir (*daozaisa*) 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 Miao hero. At the end of the Qin dynasty (1732-1855), Zhang led the Maio to fight against the Han who encroached on Miao territory. But, due to shortge of arm and supply, the Miao 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 Miao. 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 Miao pursuit of liberty and equality. This story about the tree is popularly known in Miao society. On February the each year as part of the ancestor worshipping, the Miao gather under the upside-down planted fir. They make an offering to the tree. Fir forestry is a symbol of wealth among the Miao. A man's firs are considered some of his most important assets. Furthermore, the Miao do not cut young firs while they work in the field.

Use of tree to make name is another element in the Miao culture. Many people's names are derived from the names of trees. One Miao headman is called "growing tree." This is because he grew slowly when he was a child. So he received this name from his father in order to bless him to growing as quickly as a tree. When children are born, the family registers one big tree as his "father." When a child carries or becomes ill, his family will give a new name for him, based on what elements, such as, wood, water, and soil he lacked in the meaning of his name. If the name lacks wood or tree, family need to word of use tree or wood to call him, and need to register a "tree father" (*baoye*) to him and need to offering this tree each year. Also his father should construct one or two wood bridges for the village. When these are finished, their children will have good luck or health in the future. If the registered tree is green that means their children are safe. For instance, in Dade village there are 40 people who recognize a 50-year-old fir near a well for a "tree father." The Miao also believe in the *longmai* (like dragon). They think that rattan vines laced around a big tree are like a *longmai* around the village. The *longmai* will carry their village safely and stably. Hence, it is taboo for people to cut the rattans. It is believed that if somebody cuts the rattan, he will bring disasters to his family, such as, being bitten by a snake, death, lightning strike, and fire.

In short, the Miao 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.

3.2.3 The Role of Local Market and Marketing Networks

According to historical records from County Government Office before 1949, free markets or market exchange did not exist at all in Tageba. This does not mean that an exchange of goods did not take place in any form. A transitional internal exchange system existed in the community, and external-trading activities also happened but these were not documented. I knew this from a cadre who had worked in the communist party for several years. He said, "Through history, our exchanges have been very simplified. Trade with outside has been restricted due to the reason of transportation. We just sold only a few fir timbers or firewood, and bought some salt and cooking oil from outside." Traditionally, a main aspect of exchange was labor swaps within clan families (Wu, 1994). Farmers commonly identified them as "brother" (*xiongdì*) social ties in which the main aim was to help each other and exchange goods. They disapproved of monetary trading among themselves, especially with the inhabitants of one's own village, and considered it shameful to bargain with kin or fellow clan members. However, during the collective period, the commune replaced individual trade. All commodities were collected and distributed by the production team.

The biggest and most popular market that villagers patronize is located in Taijiang city. Before 1987, the city had ten small shops twenty-six peddler stands and eight shops specializing in goods from Kaili city. The scale of commercial activities was small because the market was closed during the Cultural Revolution due to political movements. The market has been revived since the mid-1980s. There were fifty-two small houses with private shops along the city's streets in 1985. Now, there are many both state and privately run shops, such as grocery stores, restaurants, repair shops, and drugstores. Farmers sell their fresh vegetables or fruits on the street. Especially on market days, there are many peasants from different towns, villages, and cities coming to the market, filling every street corner with their farm products. The narrow streets of the city are turned into a busy market place. The temporary trade stalls number over two thousands. Most free-market exchanges are between peasants and workers, and between uplanders and lowlanders. While the mountain people sell firewood, timber, mushroom, wild fruits, bamboo shoot, and rice liquor, the valley dwellers are interested in purchasing special herbal medicines, hides and furs, and dry mushroom. Some commodity exchanges occur between local peasants and both the state-run shops and middlemen. The peasants sell dry mushroom or fruits to the shops at lower prices; in return, they get coupons for special goods such as kerosene, meat, salt and oil. Market days usually begin between 9:00

and 10:00 A.M. and end about 5:00 P.M. As soon as they have cash in hand, the peasants buy liquor, salt, kerosene, MSG, cooking oil, clothing, and tools. Many Miao people like to have a drink and a snack on the way home.

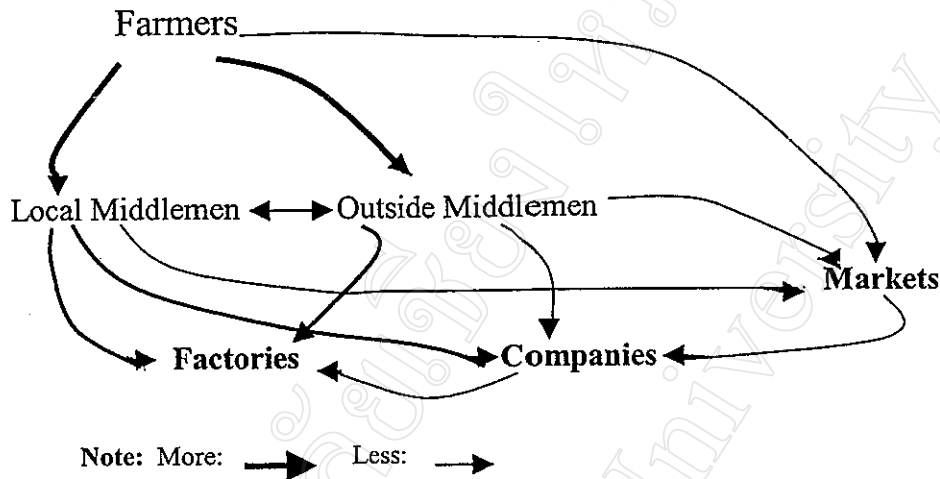
There are two other marketplaces that Tageba villagers visit: Gedong, in southern Taijiang county, and Paiyang, in northern Taijiang. They also like to go to Kaili and other marketplaces that are further away. The market in Taijiang is held on every fifth day, and the marketing days of each of these marketplaces are on different days, so that sellers and traders can go to them one after another. Today, Tageba is more closely connected with markets and commodity exchanges than before. Most articles for daily use, including tools, shoes, cooking oil, and hot peppers are bought in the market. Every household, therefore, needs to go to the market. Residents buy their rice at the weekly market in Taijiang. For example, in Dade village 40 per cent households have to buy part or most of rice in the market. Some people also employed in petty trade, such timber and fruit. There are one or two shops in each village, where kerosene, salt, pepper, cigarettes, rice wine and so forth are sold.

Since the market reforms in the mid-1980s, the market has become an essential part of their lives, and going to the market has become routine for everyone, especially young women and men. Market day has become a day off. Under market intervention, on the one hand, farmers have accelerated their consumption. On the other hand, they have been forced to earn more income. Consequently, farmers have had to change away from slow return cultivation on the farm in order to make more money. For instance, in Shangten village 86 per cent of adult men are able to weave baskets, and all of them sell their baskets in the Taijiang market every week in order to make money. Women start to sell some of their vegetables and fruits at the market in Taijiang every week.

There are several marketing channels and chains for timber trading in Tageba. Some farmers can sell their timbers to state-owned or private companies. Some farmers sell timber directly to the factories or mills in Taijiang city. Others sell the timber to middlemen or retailers. In some cases, especially those villages with transportation difficulties, farmers process timber into boards, and then sell them to middlemen or state-owned companies. A few farmers also directly sell their timber on the market in Taijiang city (see **Figure 3-2**). In fact, every time farmers sell timber they need to pay a forest tax, which is 110 yuan per cube fir timber. In some cases this payment of tax is higher than that earned from selling timber. So, for timber production a good relationship with authorities is important. It might not only gain

more flexible access to trading, but might also make it easy to cheat the weight of timber declared for taxation to make it less.

Figure 3-2. The Timber Marketing Chain in Tageba Community



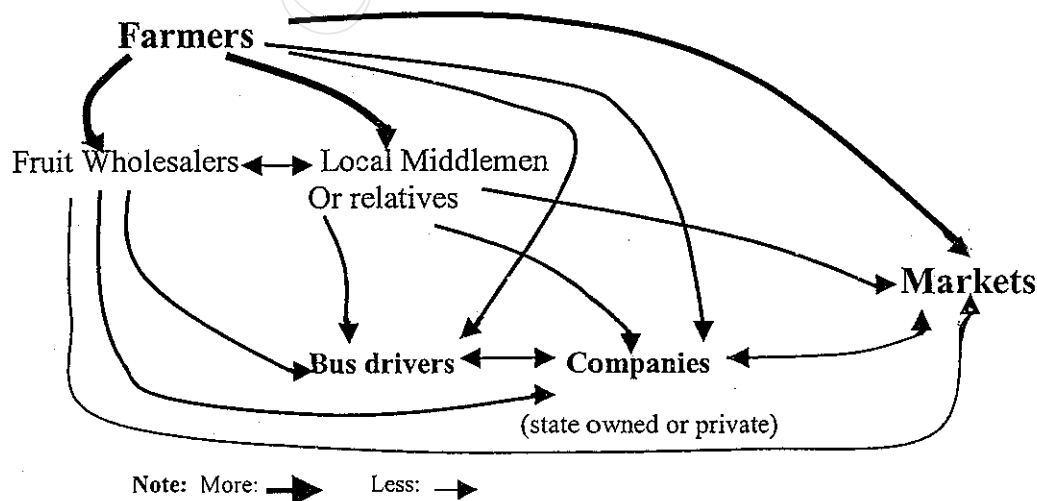
In comparison, the fruit commodity chain involves larger numbers and types of actors in its trading and processing than does timber. There are more state-owned companies engaged in the timber trading network, since logging quotas were controlled by state. Before farmers cut timber they must apply for a quotas from the local government. So, most actors engaged in timber purchasing are state-owned companies or special middlemen who have a good relationship to governmental agencies. In contrast, the fruit-marketing network is associated with more private merchants. Normally, three marketing channels exist for selling the fruits in Tageba. The main channel is through the local middlemen or wholesalers. During the harvest season, dozens of middlemen arrive in Tageba community. They negotiate with farmers whose fruit is ready to be collected. When the price of the fruit is settled, the middlemen collect, weigh and carry the fruits to the market. The payment may be made over several installments if the middlemen and the farmers are well-acquainted. A common practice is to pay the farmers up to half of the total amount at the harvesting time and the rest after the middlemen have resold the fruit. The farmers may demand to be paid the total amount on the spot if they do not trust the middlemen.

Second, farmers retail the fruits themselves, especially those farmers who resided around the road. Usually, they are confident about their fruits and think that the market price may be better than they will get when they sell fruit in the local market directly. In fact, using this practice farmers usually get better prices since they can bypass a layer of middlemen. When

the prices at the local markets are low or when the middlemen refuse to buy because of oversupply, farmers have to take their fruit to markets in Taijiang or Kaili. In some of these larger markets, they may again try to sell the produce themselves instead of going through distributors. But in this way of selling is no guarantee that farmers will make more profits because by going closer to the main markets they must bear the cost of transportation. In certain instances, their negotiating power is reduced because the buyers know that the farmers have no choice but to sell their produce after making such a long trip.

The third channel and chain for farmers to sell their fruit is to companies and bus drivers. Some farmers have established contacts with private or state-owned companies in Taijiang city and deliver the fruits to these companies. The companies engage in a formal contract farming by providing fertilizers, water pipes, seedlings and pesticides to the farmers on credit without charging interest. In return, the clients supply fruits to the companies. This arrangement seems to satisfy both sides. Also, along the national highway no. 210, which passes through Dade and Shibaniao villages, farmers retail their fruits to bus drivers. Therefore bus drivers are the major buyers of fruits in these villages. In some cases, the farmers sold fruits through their relatives or the friend's relatives in the city. Their friend or kinship member introduce the merchants to the community. Hence, maintaining long-standing economic ties and social ties with outsiders are significant for gaining access to outside traders. Social identity can assist them access markets. During an interview in Tageba, one villager told me: "it is better to trade with the friends and relatives so the products can benefit the whole 'family,' and relatives will not cheat on each others. In fact, if you want get a good price for fruit selling, the social relationship is very important."

Figure 3-3. The Fruit Marketing Network in Tageba



3.2.4 History of Tree Cultivation and Agroforestry Extension

The traditional forest management of farmers in Tageba community was timber tree cultivation. Farmers planted fir on the upland. Historically, many areas close to the highway no.210 were major places for fir timber production. Farmers gained cash income from the sale of timber and other forest products. The Miao farmers in this area have a long history and excellent experience about fir and pine cultivation. Most farmers in Tageba community do forestland farming based on a timber cultivation system. However, the Han people who migrated into the region cleared the forest in the 1970s (Wu, 1994).

By 1952, wet-rice cultivation had been widely adopted by Communist Cadres. Wet rice cultivation became the principal means of production in the Tageba area. As one farmer said, “everything was grain production in the collective period”. But with rice industry as well as market reforms in the 1980s, rice farming brought less return than before. Farmers could buy or sell the rice in free market. They no longer settled for having enough grain to eat; they also expected to have enough money to buy clothing, new bicycle, big television, a nice house, and so on. These needs led most of Miao people reorganize their resources. Under these conditions, forests become a more and more important resources for farmers making of living in Tageba. In practice, with the population increased the farmers plant and use tree enlarged, includes using firewood, logging timber, and gathing non-timber forest produces.

After the rural reform in 1979, 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 in Dade village in 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, Mr. Yang Shoufei who had just retired from the army, 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. A large nursery was set up in Dade village in 1985. The county government gave fertilizer, free seedlings, and technology to help the project. 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. Other exotic species were also introduced to this community for the first time, such as, orange, grapefruit and guava, but they remained experimental.

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.

AEP office required all government agencies to participate in pear cultivation strategy. About 0.8 million low-interest loans were prepared by AEP in order to encourage households to plant pears. As a result, many households in Dade and Shibangqiao adopted pear cultivation. Some households began to cut down the invaluable chestnut trees and fir forest in order to expand their pear farms. Some farmers did this because they were disappointed by their timber trees which grew so slowly. Some private companies, government agencies, and township enterprises also joined this industrial fruit tree plantation craze. They lent forestland or used state-owned barren mountains to plant pears. As a result of all this fruit tree cultivation, Tageba today has a total of 945 mu of pear farms.

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, especially around highway villages of Dade and Shibangqiao. Most farmers in this two villages became smallholders, with 62% cultivating less than two mu of fruit land. 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.

The fast returns of fruit growing lured farmers away from slowly crops such as pine plantations. Higher cash requirement farmers had to change their land use. They changed the types of crops grown on their farm (see Table 3-3). As a result, farmers in Tageba have opted to grow crops with faster return and/or with multiple selling seasons. In this way, they can get faster return for their costs and labor investment.

Table 3-3. The Areas Change of Tree Cultivation in Tageba

Unit: mu

	Shangten village			Xiaten village			Shibanqiao village			Dade village			Pingqiao village		
Year	Timber Trees	Fruit Trees	%	Timber Trees	Fruit Trees	%	Timber Trees	Fruit Trees	%	Timber Trees	Fruit Trees	%	Timber Trees	Fruit Trees	%
1985	122.3	18.7	15%	122.6	22.4	18%	125.3	35.7	28%	129.3	67.7	52%	108.3	12.7	11%
1990	124.4	16.6	13%	122.5	22.5	18%	119.0	41.0	34%	140.5	56.5	40%	110.4	10.6%	9%
1995	122.2	18.8	15%	121.4	33.6	27%	76.6	84.4	110%	109.8	87.2	79%	106.3	14.7%	13%
2000	117.6	23.4	19%	108.5	46.5	42%	43.7	117.3	268%	88.6	108.4	122%	108.2	12.8	11%
Total Areas	131			135			167			197			121		

Source: the reports from the Taigong Forest Station; the records from the Party Committee of Tageba community. Timber trees include: fir, pine, and bamboo. Fruit trees include: pears, chestnuts, plums, and peaches.

This table shows the land-use trends and tree cultivation in the five natural villages of Tageba community. It presents how under market intervention farmers have paid more attention to faster return trees cultivation as well as pursued benefit maximization on their farms. This table also shows that due to the different ecological settings and resources of the five villages in Tageba, each has employed different practices. Shibanqiao 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.

Summary

Over the next six decades, both Taijiang county and Tageba community have been hard hit by various events, beginning with the economic depression of the 1950s, followed in the 1960s, by the Great Leap Forward period when the commune powerfully controlled forest farms, in which traditional fir cultivation was gradually replaced by wet-rice, and private activities were prohibited. As recently as the 1970s, the region was declared a famine area due to agricultural failures under the Cultural Revolution. Agricultural production was only revived in the 1980s, when the household responsibility system was implemented and the socialist market economy was established. However, market liberalization has increased the degree of commercialization of rural life due to easier access to incentive goods and therefore higher cash needs. These factors combined with agricultural liberalization, which opened new marketing options, have pushed farming households to shift from growing “slow” return crops to growing “fast” return crops for sale. This shift, in turn, has allowed farming households to ensure faster returns on their monetary investments.

Tageba is the first areas of fruit tree industrial in Taijiang. Tree cultivation in this community has a long history. Farmers took a long time to get benefits from forest cultivation, especially timber products. Miao people have a traditional custom of fir planting, but with market intervention, the attitude of Miao toward forest changed. They changed their traditional timber-based tree management to adopt fruit tree cultivation. For forest management farmers pursued faster return and more benefits. Products such as rice, fir, pine and other slow return products have decreased, and pears, tea and other faster return cash crops have increased. This major structural change reflects in the general pattern of forest management transformation.