

**Constraints of Farmers in Less-developed Areas
to Entering Production and Marketing of High-value Agricultural Products:
Cases in the Mountainous Areas of Southern China**

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Abstract

The authors introduce the results of a few case studies made in several mountainous villages of Southern China. A non-conventional and interdisciplinary approach to socio-economic studies for development projects -- the Participatory (and rapid) Rural Appraisal (PRA)-- was followed for the study. After briefly presenting the holistic framework of the study, the cases are presented to show how some of the methodologies are applied, and what effective outputs can be gained from it considering limited time and personnel, and accuracy of information to project the planning requirements.

The cases include:

- (1) Agro-ecological and Socio-economic Zoning with Resource Mapping in a mountain village. It was found and concluded that the diversities of resource endowment and infrastructure development within a watershed, township and village did not allow a unified action of high-value product (navel oranges and pomelos) to function well. The poorer and more environmentally fragile communities could be identified with such a zoning to provide a proper base for appropriate development interventions
- (2) Classification of target groups with Wealth Ranking in a village. It was found from this case that the project of commercial lean-meat pig production could only suit and benefit very few better-off farm households. Participation of the majority of mid to low income households was restricted by their poor access to needed credit, training and extension services. They were shown a diversified and mixed farming system that could bring the roles of all their resources into full play.
- (3) Problem and opportunity analysis with various PRA tools. The cases revealed the basic needs of the farm households to their limited paddy and rain-fed arable land, and the frequent contradictions between farmers and local governments who often impose some development of high-value products, using arable land, without taking farmers' basic needs into account. The cases about the use of mountain land for bamboo processing and green tea production showed that the farm households often encountered a shortage of mountain land for production. This was an institutional rather than physical problem—a block set up by local government for unfair competition. The case on the model of “company plus farm

households” reflected the weak and low status of farmers and the need for institutional innovations.

Following the approach and using the methodologies of PRA, not only the required information could be gained in a rapid and economic way, but also the process of the target groups’ participation could be mobilized. The target groups’ sense of ownership and commitment over the development plans and actions will make the development intervention of high-value agricultural products more effective and sustainable.

Based on the findings, the conclusions and recommendations include:

1. The constraints of small farm holders in the project area to entering production and marketing of high-value agricultural products lies in their shortage of land resources in both a physical and institutional sense. The limited paddy land is mainly for food security and providing for taxes, quotas and levies. There is little left to sell and there are often food grain shortages. The even shorter supply of rain-fed arable land is mainly for vegetables, oil and fodder crops for own consumption and pig raising -- an indispensable component of the “paddy – pig” farming system. The arable land is especially restricted for younger families within a community. Farmers' use rights of the comparatively abundant mountain land in some places has been re-collectivized by the village collectives and even township governments.

Adjustment of land possession disparity and correction of those inappropriate practices should be made according to central government policy and willingness of majority villagers within a community.

2. Using the bio-diversity in mountain areas to develop high-value agricultural products is one of the options for agricultural and rural development in these less-developed areas. However, problems lie in local government initiation, which often follows the planning economy approach, in effect proposing a scale target without careful market analysis, forcing farmers to develop new and high-value products without taking their basic needs for land resources into account, executing unfair measures to block competition, etc. Such practices have been reinforced by inappropriate so-called agricultural industrialization in the less-developed areas.

It is recommended that social equity be included in objectives of development and by local governments. The relevant central policy to relieve farmers’ burden and protect their rights and interests must be implemented.

3. The model described in the paper, called "company plus farm households", is a better option for high-value agricultural products than local government initiatives. However, farmers’ weak positions must be changed using some institutional innovations. Reform policies to develop a favorable environment are described.

Agricultural specialization and industrialization has been promoted since the middle 1990s in China. High-value products such as vegetables, fruit, meat, etc. are the main focus of the development. However, there have not been too many successful cases of it yet, especially in the vast less-developed mountain areas that occupying more than 70 percent of China.

Officials often attribute innovation development failures to physical deficits of needed infrastructures such as transportation, marketing and information facilities, etc., and to the low knowledge/technology level and conservative attitude of farmers. By reporting some concrete cases, some professionals and media have correctly criticized the imposing approach of local governments as the main cause of failure. However, there have been few case studies made at the grassroots level to reveal the deep and more fundamental reasons for the failures and the possible negative impact of such developments, especially on sustainability and social equity.

What are the priority and basic needs of the majority of farm households in use their limited arable land? Do they really have a significant amount of surplus arable land to develop high-value cash crops? Should small farm holders specialize or diversify their enterprises? What are their opinions? What about the high-value agricultural production on mountain land? What happens to the welfare of the majority farm households, such as land use rights, during the development process? What are the farmers' perspectives on development problems, constraints, opportunities and solutions? And what are the appropriate options of policies, development interventions and institutional reform to deal with constraints in high-value agricultural production in the less-developed mountain areas? The following case studies help answer those questions.

Methodologies of the Case Studies: A holistic framework of Socio-economic study for Rural/Agricultural Development Project Planning with Participatory Rural Appraisal (PRA)

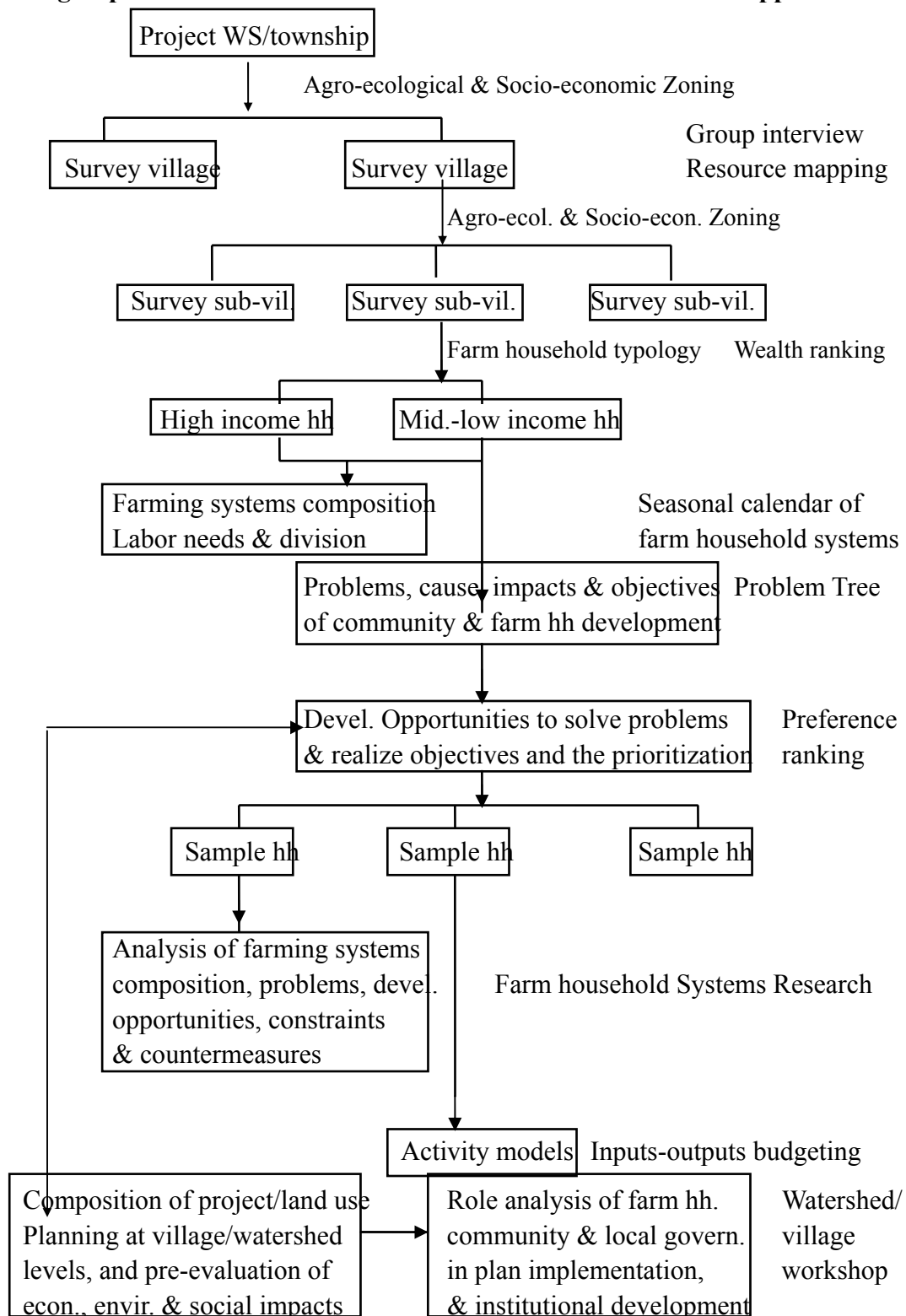
The authors applied a non-conventional and interdisciplinary approach to socio-economic study - Participatory (and rapid) Rural Appraisal (PRA) in the case studies. With the approach, very effective outputs were gained with limited time and personnel, and accurate enough information was obtained to project planning requirements.

Figure 1 shows the holistic logical framework, steps and methodologies of the study for rural/agricultural development project planning at the grassroots level. Those methods were elaborately developed in authors' long years of practice using and adapting various PRA tools in Chinese conditions. The logical framework and the composition of the steps were tentatively formulated in 1995. They been tested, verified and improved through long and short term consultancy by Li Ou and more than 10 training missions for projects jointly funded by international organizations such as the World Bank, WFP, IFAD, GTZ, KfW, etc., and the Chinese government. The efforts are among

Figure1 Holistic Framework of Participatory Operational Planning

Working steps

Methods applied



those made by colleagues at CIAD -- the Center for Integrated Agricultural Development, China Agricultural University -- a unique institute in this field in China.

The framework in Figure1 consists of interrelated modules of the steps and methods applied. The actual analysis could be reorganized or just conducted up to a certain stage according to the objectives and requirements of the socio-economic study and the different stages of project identification and planning.

Applications of the methodologies and outputs of the case studies

Case One: The diversities in resource endowment and infrastructure development among rural communities identified with Agro-ecological and Socio-economic Zoning has revealed the non-rationality of a unified single strategy of local government for mountain land development

Following the PRA approach, the field study for project identification or planning is usually started with Agro-ecological and Socio-economic Zoning in the project watershed or township. The key informants' workshop or group interview and resource mapping are made, and the representative survey villages selected for the main types of the zones. The same exercise is also done at the survey village to classify the sub-villages and select the samples to make a complete survey. It is also necessary to carry out similar exercises at county, prefecture/municipality and even provincial levels before the field study, to classify and select the sample sites for surveys at the next lower level.

The reasons to make such a zoning or classification, and select the sample locations level by level are justified by a judgement about an obvious heterogeneity within a watershed or administrative village in mountain areas of China, in terms of resource endowment and socio-economic infrastructure. Accordingly, there are differences in the problems and opportunities of the farm household economy and in community development, constraints, countermeasures and development needs among the villages within a watershed/township, and the sub-village¹ communities within a village. To make a survey of those samples, selected in this logical way, can reveal spatial differences and patterns in the above-mentioned aspects. It can help identify the target areas of a project, thus using limited personnel and time, and spending less money. The subsequent survey and rural/agricultural development project planning could be made comprehensive and appropriate to the reality of the watershed/township and rural community.

The following case shows how the contradiction between directed unified development of fruit production in a whole prefecture and the diversified resource endowment and infrastructure of rural communities was identified by the zoning and resource mapping exercises.

The government of one of the mountainous prefectures in a province in southern China decided to initiate a campaign to develop another "prefecture" on mountain

¹ Sub-village: The basic unit of rural community to allocate the land use right to farm households, and make planning and management of the land use. It was the production team during the Commune period (1958 – the early 1980s).

land in the middle of 1980s. The idea was that the incremental value of new high-value products from the mountain land would equal the value of the conventional agricultural products, (mainly from arable land), in the prefecture. The main species were navel oranges and pomelo. The task of the development, from several hundreds of thousands of *mu* to over one million *mu*² was allocated from the prefecture to the counties, townships and villages annually.

Some local policies were executed at the same times. They included such measures as development should be made in size with concentrated location and plots linked to each other, and deadlines date were settled for land preparation. The use right of those farm households who had difficulty it on contracted mountain land was extended out for at least 15 years. The contract of such mountain land development by large specialist households and outsiders such as government institutes and line agencies was encouraged. Favorable grants or loans to finance the development were made.

There was no doubt that the development of high-value agricultural products would increase farmers' income. However, the problems lay in the approach to development. It neglected the diversity of resource endowment and infrastructure of the mountainous rural communities and overlooked the land use rights of farm households.

Taking Cangxia Village in one of the counties of the prefecture as an example, its 11 sub-villages were classified into three categories by the village head using Resource Mapping (see Annex 1). The three better-off sub-villages had paddy land with better irrigation/drainage and fertility conditions and more acreage per capita, more fish ponds and better access to transportation. The limited mountain land had been developed into village or sub-village owned pomelo orchards. The farm households could only plant some pomelo trees around their houses. The three medium sub-villages had poorer road and paddy land conditions. About half of them were rain-fed and thus guaranteed only early rice with more mountainous land for growing fruit trees. The four poorer sub-villages has the worst road and paddy land conditions. The mountain land is higher, steeper and stony with shallow and sandy soil. The vegetation is thin and sparse due to the over-collection of firewood. Erosion can be found in some places. The site is not suitable to develop pomelo or navel orange production.

Therefore, it could be found that such a campaign with a single development option for the whole prefecture could not suit nor benefit all the communities even within a village. It was found out by the prefecture fruit bureau that more than 90% of the mountain land in the prefecture was not suitable to navel orange and pomelo production nor could it have high yield and quality due to the sites conditions and lack of irrigation although temperature and rainfall are suitable. Such a practice reinforced the advantages of the resource-rich and infrastructure-better area with favorable policies such as biased financial support, and either neglected the poorer areas or caused erosion on the unsuitable mountain land in such areas.

² *mu* is a Chinese area unit, equaling to 0.067 ha.

Again in Cangxia Village, although the three medium sub-villages have suitable mountain land, the villagers could not fully benefit from it. 400 *mu* of the mountain land owned by the sub-villages was used cleared of vegetation and prepared with terracing and pit ditching in 1994 and 1995 in a campaign initiated by the township government with VCL³ of the village and the other villages. However, it was then left idle for two years because there was no proper arrangement made for the mountain land previously contracted by individual farm households. Finally, it was rented by the prefecture Grain Bureau for 50 years to set up a fruit orchard.

Although some arrangement was made between the orchard and the land tenure owners for sharing profits (or some households who contracted the daily management of the fruit production), the arrangement was considered unfair by those farm households involved. Especially, the owners with tenure would have liked to engage in development on their mountain land by themselves. They knew well how much profit they could gain from fruit production because the village had been a demonstration site of a provincial development agency in fruit production for more than 10 years.

Although the village collective provided daily coordination and management to guarantee the existence and operation of the orchard within the community territory, and by law is actually the owner of the land, it has not been involved in arrangements.

There are a lot of such cases in this prefecture. It has brought about problems not only of social equity, but also environmental degradation. Because the arable land is very limited, the mountain land is the only resource poor farm households have to potentially generate income and alleviate their poverty. If their tenure is transferred for 15 to 30 or even 50 years, what can they do then? On the other hand, the big specialist households or outsiders always follow a commercial production pattern with mono-culture for contracted mountain land. It is different from the practice of small farm holders who diversify cultivation with inter-cropping of annual cash crops such as water melons or groundnuts in first three years before while waiting for the trees to bear fruit. They cover the land very quickly due to the intensive use of farm manure. In mountainous areas commercial production patterns always leave the land between the trees uncovered, which creates new erosion.

Case Two: The wealth disparity among farm households identified with wealth ranking disclosed why the specialist household model of high-value agricultural pig production does not suit the majority of mid-low income farm households.

An extensive survey at the sample sub-village starts with classification of farm households via key informant interview and wealth ranking. The features of each type of farm household and the reasons for belonging to a certain type are explained to the key informants. To do this first during the survey process is justified by the judgement that, although living in the same community with similar resource endowment, socio-economic infrastructure conditions and opportunities to develop the commercial

³ VCL: Voluntarily Committed Labor – The obligation of rural labor for the welfare of the community, such as in water conservancy and road repairing. 5 – 10 days a labor a year is stipulated.

production, conditions are not the same among different household types. Therefore, the problems and needs related to their subsistence and development are different and, accordingly, the constraints to use opportunities and countermeasures are also not the same. Based on the analysis of the differences, and further conducting group interviews and case studies, project measures and activity models can be identified appropriately to the needs and conditions of different household types, especially the target groups of a project -- the middle-low income farm households -- which is the majority of the rural population. With such a methodology, the targeting mechanism of a project can be assessed.

The farmers rear more pigs in the villages visited in one of the counties in southern China, which is a national base for lean-meat pig production, than the other counties of the province visited during the mission. There are better accesses to extension/veterinary services and marketing in this county. The county proposed a project to support rearing lean-meat pigs of 50,000 heads, 100 heads a household. However, such an arrangement could only possibly suit to a few better-off households.

In a sub-village visited, a key informant classified the more than 40 farm households into 4 categories -- the better-off, upper-middle, middle and poor, about 1/4 each. The better-off have more cash income to raise more pig. Some have state staff or village teacher with fixed wage. Some make bean curd processing, using the residue to feed pigs. Some others contracted fish ponds, by paying more than the others during the bidding, and integrated pig raising with fishery, feeding fish with manure. The upper-middle have more diversified farm household systems, growing more vegetable, rearing fish, engaging in handicraft, etc. They rear fewer pigs than the better-off. The middle grow less vegetable, rear even fewer pigs and have no handicraft. Usually both the upper-middle and the middle have surplus labors migrated or working locally to get non-farm cash income. But the upper has more labors than the middle. The household's heads of the poor are often the young. They have less rain-fed arable land per capita than the other households due to the lack of land adjustment. Therefore, they have the least vegetable growing and pig raising. They have no surplus labor and any handicraft, but more burden of schooling fee for children.

From the case, it could be found and concluded that:

- 1 Except for the better-off, all other categories of farm households have less or no ability to generate enough cash income to engage in the commercialized lean-meat pig production. It is also almost impossible for them to get enough credit and extension/veterinary services to initiate it as the big specialist households do, due to the limited funds and service. In addition, the deficit of rain-fed arable land is a constraint for some of them to grow more vegetable and other fodder crops, and raise more pigs in a conventional way. Therefore, the specialist household model for commercialized production promoted by not few projects could not suit and benefit the poorer farm households, but enlarge the disparity of income among the households, if a wrong targeting were made.

- 2 Most of the middle and poor households can only get profit and succeed by diversify but not specialize their farming activities. Fully using their own-produced feed and roughage such as sweet potato and vegetable plus necessary amount of concentrate is the optimal way. However, the high-value three-string cross breed piglets proposed by the project in this case could not grow well and fully play the production performance in such a low-external inputs' way. The market risk of such kind of pig breed is also too high, compared with the two-string cross breed supplied mainly to the local market.

Cases 3 – 5: The analyses of needs, problems, development opportunities and constraints by farmers.

The concrete survey at the sample sub-village consists of two parts – the group discussion and household interview. It generally starts with a group interview, using the seasonal calendar of activities to understand the composition of local farm household systems, the farmers' arrangement of their land and labor resources in the amount and time to meet the current basic needs of the farm households. Meanwhile, the gender division in farm activities could facilitate the analysis of women's contribution to the farm households' livelihood and the current situation of their access to resource.

The three activities conducted up to now have such an interrelations: Resource mapping and the classification of communities within a watershed/township or village were made for the understanding on the **physical** conditions of the community and farm household development. The classification of farm households was for understanding on the composition of **human** groups within a community and the differences in their resource and socio-economic conditions. The seasonal calendar of the farm household systems was for a comprehensive understanding on the integration and interactions between “**human**” and “**physical**” factors - the interdependence between farmers' subsistence and development and the local resources. In this way, the outsiders could get a holistic knowledge background and information foundation, for later facilitating local farmers to analyze the problems and opportunities in the aspects of resource use and infrastructures, and prevent from the possible conflicts between planned development intervention and farmers' current basic needs.

Now the survey can make the situation analysis. Group interviews are made to analyze the problems of farm household and community development, and the causes and negative impacts, using “Problem tree” and Venn Diagramming, and identify the objectives of sustainable development in terms of economy, society and environment, oriented to the problems and impacts. Using preference matrix to identify and prioritize the development opportunities, in terms of infrastructure improvement, sectors within the farm household systems, and the activities within a sector, which can solve the problems and realize the objectives.

After these, key informant interview and case studies are made, with the representatives of the target groups. Following the methodology of Farm household Systems Research (FSR) and budgeting of inputs-outputs, the composition of the

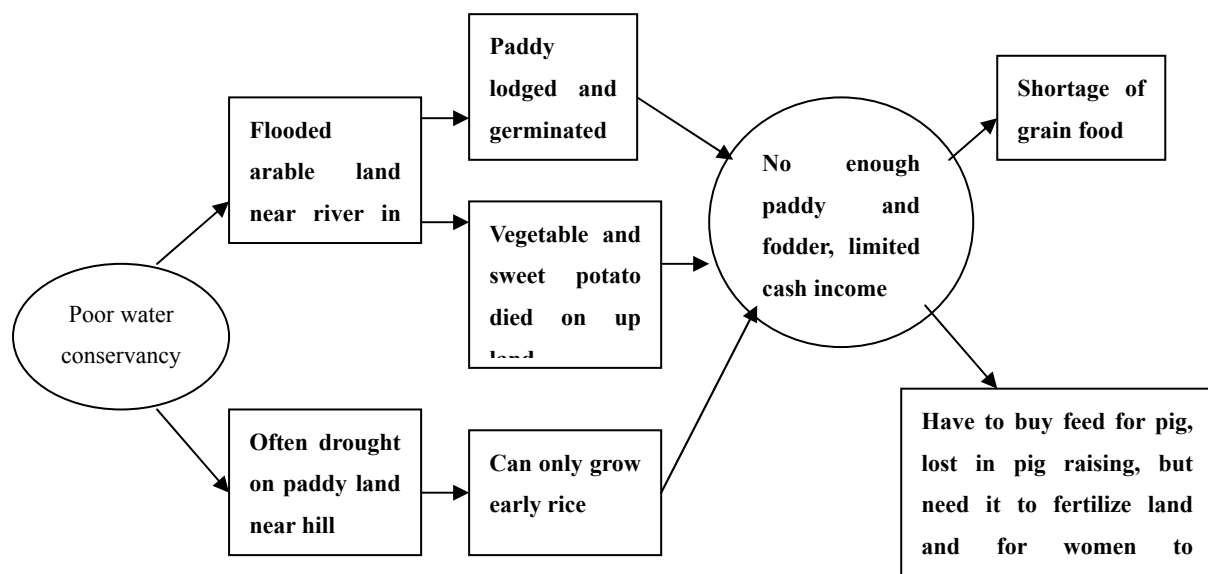
systems, the development problems and appropriate opportunities, and the corresponding constraints and countermeasures are analyzed, and proper models are designed for the project activities.

The following cases illustrated how these methods were effectively used to identify or evaluate the development opportunities and constraints.

Case Three: The development of high-value agricultural products and the limited arable land of the farm households.

In one of the mountainous counties of a southern province in the south of China, the fine variety rice seed production has been developed quite well, including the hybrid and conventional seed production. It could bring more income to the producers than the rice production. The local government put forward a project proposal for that. It suggested that the implementation institute rent 100,000 mu of paddy land from the farm households with 600 RMB yuan annual payment. 10,000 technicians will be involved in hybrid seed making. One person is in charge of 10 *mu* paddy land. There is only 0.65 mu paddy land per rural capita, and about 2.9 mu a farm households in this county. Therefore, it is not possible for all of the paddy land tenure owners to participate in the project and work on their own land. The problems lie in what is the farm households' basic need for the paddy land, whether the farm households want to rent their paddy land out, if they want it, how much they want to be paid, and how it could be organized to meet the strict isolation requirement by hybrid seed production.

The following problem analysis made by male and female farmers of a village, with the author's facilitation showed very clear the interrelations between farmers' basic needs and the arable land, and among the components of the farm household systems.



On average one mu paddy land can produce 1,600 *jin*⁴ paddy by two seasons in this county. It means 1040 *jin* a rural capita. From that, about 10 – 15% should be sold to the township grain station as the agricultural tax, quota grain and levies/fees. The remaining about 800 – 900 *jin* are mainly for farmers' own consumption and feeding pigs. And there is almost no surplus paddy to sell. It means that farmers have to depend on paddy land for their food security and fulfilling the obligations.

There are differences in the area of paddy land per capita among the communities and farm households. The disparity among the households within a sub-village was caused by population's increase and decrease of the families. The wives married in or children born after the last time's land tenure adjustment (made every three to six years) within some households have not yet got the share of paddy land. The adjustment of the land use right disparity is one of the considerations of the central government's new policy to extend land contract for another 30 years. However, it has not been well implemented in not few villages where the extension was made in 1998 or early this year. The families having more land (with aged people passing away or daughters married out) did not want the adjustment. And the local leadership was not strong or responsible enough to tackle such a conflicting issue.

In such cases, some young families within the community have no enough paddy land to produce staple food. The husband and even the couple migrated to make money to meet their basic needs and rented their paddy land to the other villagers. It is more common in the villages with less arable land and more migration.

Due to such differences, some farmers interviewed during the case study expressed the willingness to rent the land out, esp. in the villages where the renting of paddy land exists more. However, they considered that 600 RMB yuan might be acceptable by those migrants but seems too low to them. They thought that at least the equivalence of early and later rice's income must be paid for the renting.

But most of other farmers didn't want to rent out land, but preferred to make seed production by themselves. They said that they depend on cropping for living and food, if the land is rented out, what can they do? Especially women depend on cropping and pig raising to contribute to the family.

There is the landscape advantage in this county for hybrid seed production in large area. But the organization among farm households to make the required isolation would be difficult. The paddy plots of the households are fragmented, scattered and intersected with each other. It is almost impossible to have all the households concerned agree to voluntarily engage in seed production with their paddy land. And the so-called "administrative" imposing measures often fail at present without farmers' willingness.

There are much less rain-fed arable land than paddy land in the rice farming mountain area of southern China. The farm households use it mainly for growing vegetable, sweet potato/potato and groundnuts for own consumption (stable food or edible oil),

⁴ *jin* is a Chinese weight unit, equaling to 0.5 kg.

selling (if there is a surplus) and feeding pigs.

Pig raising is indispensable to the farm households' livelihood, esp. in the "paddy – pig" dominated farming areas. Farmers, mainly women, raise pig not only for accumulating the inputs of labor, time, roughage and green fodder and cashing it when the family needs money (for schooling fee, seeing doctor, etc.), but also for fertilizing the arable land. It became more important along with the input's price increasing.

However, some local governments, usually at township level, neglected the farmers' basic needs and imposed the tasks to grow other products with higher value. In one of the townships in such counties, the government asked local farmers to grow *Gegen* (the root of kubzu vine) that has medical effects and can be used for foodstuff production on all of their rain-fed arable land. To grow such a high-value product is not a bad idea. But the questions include how much land area to be grown with *Gegen*, leaving enough for farmers' basic needs, what about the marketing perspective, and how it should be initiated – by farmers themselves voluntarily or imposed.

Case Four: The development of bamboo production and processing and the institutional shortage of the required mountain land.

The bamboo production has been increased for recent years by farmers' cultivation, in terms of area and output, in the mountain areas of Southern China because of the increasing market demand and processing. However, due to the importance of the mountain land to the farm household economy and the forestry development and revenue of the county, its tenure issue is often complex and problematic in such area. In one of the forestry counties in Southern China, the mountain land use right of the farm households has been changed for several times since the early 1980s when the use right was allocated, either by re-collection back to the village collectives and even township or by the shareholder arrangement or renting to companies for afforestation. Farmers either lost the direct management right or got less than before because of the increased management and marketing costs. Therefore, such a shortage of required mountain land for the farm households to develop bamboo production was not the physical but an institutional one in such areas.

Most of the farmers interviewed in the mountain villages in that county want to develop bamboo production, because it is much faster than planting fir or other trees to get return. But they prefer doing it by themselves, not renting out their bamboo land to a forestry company, or getting back their land use right. If a shareholder arrangement was made, it is often considered as unfair by local farmers and proper adjustment should be made.

Case Five: The development of high-quality green tea production and the block inserted by local government and the weak position of farmers within the "Company plus farm households" institutional arrangement.

The importance of the mountain land, esp. the tea land becomes more and more important in the mountain villages with arable land shortage in one of the counties of a southern province, along with the increase of high quality tea's price. Tea growing

and home-processing is the most important cash income in one village visited in that county because of the high quality of green tea produced there and the techniques farmers hold.

However, farmers have not got so much as they could get. They attributed the township government as the biggest constraints to that. The government did not allow farmers to sell tea to the other buyers than its owned two institutes. The gross margin of buying and selling prices was very high, accounting even up to 300%. A checking station is set up during the tea-selling season by the government on the road down to city town. Very unfair penalty was executed if a farmer was found to sell tea out of the township.

Compared with the local government imposed institutional arrangement, the pattern of “Company plus farm households” developed for recent years is a better one and favored by farmers. Such a company was set up in this county to purchase green tea from farmers and further process it into high quality tea. This year, farmers were allowed to sell tea to this company. But it was not allowed to set up a purchasing agency in the township. Farmers had to travel 60 – 70 km to the city where the company located.

On the other hand, due to the lowest and unorganized status of farmers in the fast changing society into a market economy, such a pattern is not as so ideal as described. Farmers’ position in the relation to this company is very weak. They suffered a lot during the marketing of tea. The date and price offered were at will of the company’s managers. Farmers might have to wait outside the company for one week to sell their tea. The same quality tea often got different price.

Conclusions of the case studies

The following conclusions can be drawn based on the findings in the case studies:

- 1 Generally, the market in China for conventional agricultural products such as pigs, vegetables and fruits is saturated. However, the demand for high quality and/or new products is increasing. This is especially true of products specific to some locations such as mountains areas. Therefore, development of high-value agricultural products is one of the options for agricultural and rural development in those areas.

The specialization or industrialization of agricultural production has been promoted since the early 1990s in China. But it has succeeded only in some areas coastal provinces and municipalities, and some cases in the less-developed areas. There are many cases of failures. The problems have included infeasible targets and approaches to them. initiative by local government often follow the planning economy approach of proposing a targets without careful market analysis, imposing on farmers to develop new and high-value products without taking their basic needs for land resources into account, executing unfair measures to block competition, etc. Such practices have been exacerbated by inappropriate so-called

agricultural industrialization in the less-developed areas.

- 2 The constraints of small farm holders to entering production and marketing of high-value agricultural product lies in the shortage of land resources in both physical and institutional senses. Limited paddy land is mainly for food security and providing for taxes, quotas and levies. There is little left to sell and there are often food grain shortages. The poorer rain-fed arable land is mainly for vegetables, oil and fodder crops for household consumption and pig raising – an indispensable component of the “paddy – pig” farming system. The arable land is especially limited for younger families within a community.

Mountain land is abundant in much of south China. However, the disparity in use rights among farm households is even larger than in areas with considerable arable land. Mountain land use has never been adjusted since its distribution to farm households in early 1980s. In fact, use rights have been taken back by village collectives and even townships for various reasons and kinds of arrangements. Those farmers concerned have at least lost the direct management rights to develop high value agricultural products.

- 3 Some of local governments, especially at the township level, have not provided necessary guidance and services to farmers. Rather, they have become involved in unnecessary operations of economic issues, even sharing farmers profits.

Because of that, the environment at the township level is not always favorable to the development of high-value agricultural products. Some township governments have implemented some unfair policies for competitors which have also harmed farmers’ interests.

There are two reasons attributed to such practices. One is that townships have been facing financial problems since the government financial reform was made in 1980s so that it has been necessary to find ways to increase its revenue. The other reason lies on the evaluation and promotion system for cadres, especially for local leaders. It usually includes how many mu of land has been developed with new agricultural technology, products or projects, etc. So, it is very easy for the cadres to forget the people by focusing responses on the upper level.

- 4 Compared with the involvement of township government, the companies play much better roles in the promotion of certain kinds of high-value agricultural production. However, except a few cases, the companies have far not yet developed a kind of partnership with farmers. The reality of the “Company plus farm households” model is not so ideal as described.

Currently, farmers are the weakest social group with the lowest status in such a fast changing society during the transition from a planning economy to a marketing economy. And there is no farmers’ own organization strong enough to lobby their interest. Not a few cases showed that it could not be expected for the companies to fully consider farmers’ interest at such a situation.

Even though, the pattern of “Company plus farm households” is a better

alternative than the other choices. The farmers also like or hope the companies to provide or improve the needed services such as inputs, technology and marketing.

- 5 Because of farmers' current status, some institutional innovations should be made to protect their interest. Therefore, the development of high-value agricultural products have less difficulties technologically but more institutionally. The central government policies are quite favorable to such innovations
- 6 The production scale of a farm household promoted by local government for a certain products often neglected the poor households to increase income.

The middle to poor households really lack funds, technical service and training. If they can get these factors and make technology change, the aggregated increment of products and income will be much larger than that of only a few big specialist households, according to the principles of production economics.

Such small farm holders need not the specialized but a diversified farm household system, to fully use all kinds of resources they have and the possible relations among the components. They can get more share of the market, using the project support and the advantages such as cheap labor. Through competition, the better-off farmers can shift to the other intensive new agricultural production.

4 Recommendations

- 1 Adjustment of land possession disparity and correction of those wrong practices should be made according to central government policy and willingness of the majority villagers within a community.

More fundamentally, the social equity must be included in objectives of local development and consideration of local government. The relevant central policy to relieve farmers' burden and protect their rights and interests must be implemented.

- 2 Due to the current institutional patterns, some innovations should be developed to guarantee farmers' interest and participation in the high-value agricultural development.
- 3 The operational pattern of "Company plus farm households" could be one of the major institutional options. However, much more improvement should be made. The county/municipality government can and should give the concerned companies the necessary supports but not the monopolistic status, disadvantageous over the non-state and non-local enterprises. The business behaviors of the companies must be monitored and supervised. The companies should only be developed based on a mutual beneficial partnership with the farm households but not on other means, e.g. the government administrative measures.
- 4 The government should leave out from the direct involvement of the development. Its roles should be mainly focused on the improvement of the environment for the investment and local development. It includes the improvement of water

conservancy, constituting the policies to guarantee the order of market competition, e.g. prohibiting the government at lower level to make unfair competition, and the social equity, implementing the laws and regulations concerned with the business behaviors and environment protection.

- 5 To facilitate the development of the partnership, a farmer-participated committee could be established within the “Company plus farm households” pattern.

For the pattern of closer relationship with certain amount of farm households, the farmer members of the committee could be the representatives of the households. However, they must be elected by the concerned households but not appointed by company or township government. A kind of monitoring system should be established to guarantee the representatives to represent the households’ interest all the time. Within this arrangement, the farmers’ representatives should participate in the decision-making of the farm gate-purchasing price for the product and all the other important issues related to the households.

For the pattern of looser relationship with much more non-fixed households in the production base area, the heads of the concerned villages could participate in the committee. But they must be those directly elected by the villagers, according to the new law of “Organization of Villagers’ Committee”, but not those appointed by the township government, or invited by company.

- 6 Because of the challenging feature of the high-value agricultural product development, a new kind of project management system should be established. A kind of neutral and more independent agency needs to be developed at the township level. The staff should response directly to the upper level PMO and closely serve the project households, but not influenced by the township government. They will be responsible for the selection of the project households according to the project principles and criteria, facilitating them to design the proper activity model and fill in the application forms, monitoring the progress of fund disbursement and re-collection as well as the households’ needs, and providing/looking for the technical service to the households.

Neither such staffs nor the township government should be involved in the concrete disbursement and re-collection of project funds. It’s better be done by an independent and official financial institute such as RCC.

The establishment of such a field staff team is possible due to the reform process in China. The re-structuring of government will be started soon at the county and township levels. About 50% of the staff have to leave their position. The project could recruit the qualified ones from them and provide special training to them, to have them play an independent role, a little bit similar with NGO staff.

At the upper levels, the coordination among the line agencies should be improved, because to well implement the proposed projects needs not only the monetary, physical and technical efforts but also the institutional and policy arrangement. Even the technical issue could often not be tackled by only one line agency because of the comprehensive feature of the most project components proposed.

- 7 Although the farm households are in an unorganized condition in the areas visited, the project could do a lot in the farmers' self-help organization development.

The requirements of water conservancy development were found during the visit mainly at village and even sub-village levels. The user groups should be developed. Such self-help is also very important to the technology development and dissemination as well as technical service. Due to the fund shortage, the technical extension and service of the line agencies to farm households have been in a status of semi-paralysis for recent years. Along with the reducing staff during the re-structuring of government, it could become even worse. And the full play of the extension and service functions by the concerned companies still needs time. Therefore, the "Farmer-to-Farmer" approach already existed in the visited area, although still very preliminary, should be promoted in a great effort.

- 8 For the company or state institute borrowers, the lending of the project loan must be very careful. Those institutes proposed by the project proposal, which have been operated quite well following a market economic way for years, could be considered. But to the company/institute without a clear knowing of its economic performance or established newly, a careful attention must be paid. For example, very few pig breeding farms run by the agricultural/animal husbandry bureau can get profit in recent years national-wide. And the loans of the state factories/companies at the county level or the enterprises initiated by township governments, have much lower repayment rates than the farm households' borrowed.
- 9 The individual farm households, esp. the medium to poor ones, should be the main borrowers of the project, because the shortage in fund is the largest constraints to the development of farm household and the community.

The requirement of farmers for funds could be met in two ways. For the components with closer relation between company and farm households, the company (with a better operational performance) could be the loan borrower. The company account-sells the inputs and provides services to farmers. All the costs involved will be deduced when farmers sell the products to the company.

For the project components of tea, pig, vegetable, etc. the funds should be directly lent to the farm households via financial institute at grassroots level in rural area, such as RCC. However, the duration of the loan must accord to the time cycle of the production. Because of the difficulty of the medium and poor farm households to provide mortgage and guarantee, a kind of group-lending arrangement could be tried, using the social norm and ties.

- 10 The land tenure issue should be considered by the project municipality/county governments. If the use right of paddy land has not be extended to other 30 years in some project areas, the adjustment should be made to reduce the acreage disparity among the farm households, according to the majority's willingness of the community and the central government policies.

It was found that the use right of the rain-fed arable land had not been touched in

some villages visited during the tenure duration's extension. The one for mountain land had never been dealt with by any village visited. It is understandable because of the limited benefit from these two kinds of land. However, if the conditions, e.g. the water conservancy, are improved greatly by this project, the productivity and income generation capacity will be significantly increased. The basic circumstance of these kinds' land tenure will be completely changed. The farmers may become eager to get those lands and participate in the project components. In such a case, the beneficiary coverage of the project interventions and the social equity issue should be considered. And the adjustment of those lands' use right might be needed, according to the relevant laws and regulations. The land tenure could be physically adjusted to meet the requirement of the farm households, esp. the young families. But it could also be tackled institutionally with a shareholder arrangement, to take those households' needs into account. The later way might be more environmentally friendly.

During the implementation of the project components involved in by the land tenure issue, the land use right took back by the village collective or even township should be returned to the original owners in a certain proper way.

- 11 The approach and methodologies of PRA could be continuously in the project planning and implementation, to identify project areas, target groups and activities. It is an important means to guarantee farmers' participation and commitment to the project.