

CHANGES OF RURAL AREA IN THE OUTER URBAN FRINGE OF BEIJING CITY, CHINA: A CASE STUDY OF ZHANGGE VILLAGE

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Abstract In this paper, the author tried to analyze the process of rural area changes in the outer urban fringe of Beijing City and made clear conditions of changes after the policy of economic reform and opening to outside world in China since 1978. Based on field survey analysis of changes of Zhangge Village, the author shows that changes of rural area in Beijing City were divided into three periods after reform and opening: the period of people's communes (before 1984), the period of reform and opening (1984-1989), the period of socialistic market economy (after 1990).

The productivity of agriculture has been increased in Zhangge Village, where socio-economic system has been changed from "collective agricultural production system" to "agricultural production responsibility system" after the people's commune was disintegrated. However, there has brought about some new problems in land use and construction on farmland and widening gaps between rich and poor families. Nevertheless, such problems have been solved since a new cooperative agricultural production mode has been introduced.

Through survey to Zhangge Village, changes of land use and agricultural management and rural organization are due to changes of state policies benefit to a liberal circumstance for peasants in the urban fringe of Beijing City after the reform and opening. Meanwhile, there are also influences of external factors as industrialization and urbanization interacted with internal factors such as agro-technical advance and changes of peasants life styles.

Key words : outer urban fringe, rural area, economic reform, opening to outside world, Beijing City, agricultural production responsibility system

1. Introduction

The countryside around large cities plays a role that supply agricultural products, land and labor. Land use and landscape of countryside vary according to levels of this role (Ilbery 1985). Their essential factor and function of urban and employment opportunity decrease from the inner urban fringe, the outer urban fringe, urban shadow to rural hinterland (Bryant *et al.* 1985, 1992; Yamamoto 1991).

Due to the closeness to cities, the urbanization of land use and farm characteristics in the inner urban fringe speeds up with the development of the cities (Bryant 1981; Bryant *et al*

1985). On the other hand, even though there are developments of housing construction, recreational facilities and raising of commuter settlements in the outer urban fringe and urban shadow, people are still engaged in agricultural production in these areas. These countryside characteristics are also prominent on the landscape and land use (Ilbery 1985; Yamamoto and Tabayashi 1987).

As all we know, there have been great changes in urban fringes of metropolitan area in developed countries since the Second World War. Are there differences of changes in the suburbs of large cities in China from what we have seen in other countries? The differences of agricultural production, land use, part-time farming and peasant family division are important topics in urban fringe between developed and developing countries. There have been great changes occurred in large cities of China since the reform and opening to outside world. To study these changes is the purpose of this paper.

There are so many study results in various fields about these changes now. But most of the studies mentioned above are from viewpoint of agricultural economics or sociology. Meanwhile, those studies mainly focus on external impacts of changes of the state policies but are in short of internal factor analysis related to the external impacts. Furthermore, those studies (including field studies) have some limitations. First, most of the field studies were targeted to the townships (towns) or higher administrative regions. Second, many field studies were accompanied by local officers (town or village level) and translators (for foreigners). It is a shortcoming for a field study if you could not talk directly to peasants. Third, they used too old statistics that could not reflect real current situation. Looking at the existed studies, it is still an important research subject to study changes in suburbs of large cities which is an important part of agricultural and rural changes in China.

On the side of agricultural geography, structural changes of rural areas are compounded of natural environment, historical evolution, social and economic conditions. It is an important research subject to study rural situation from various scopes. There is an approach to the real situation by using "historical perspective" and "micro perspective" on the agricultural geography and economic geography. Along with the social-economic changes, to understand rural and agricultural impacts of the policy is extremely important, particularly under the reform and opening to the outside world. As the step of study, the author thinks intensive rural survey is necessary.

In this paper, the author takes the suburbs of Beijing City that is the second largest city in China as target area to analyze the real situation and factors of changes after the reform and opening. It covers rural area within a radius of sixty kilometers from the central point of the city. For convenience of study, the author defines the suburb according to distance from Tian'anmen Square, up to thirty kilometers is the inner urban fringe and other than thirty kilometers is the outer urban fringe.

Beijing is situated in the northern part of North China Plain, where mountains back to its west, north and northeast, and its central and southeast parts are plain. The municipal Beijing is composed with 10 districts and 8 counties (Fig. 1). Besides the city proper, most parts are rural areas. Total population is 11.64 million, rural population is 3.76 million. Organizations at the grass-roots level are townships and villages (former people's communes and production brigades).

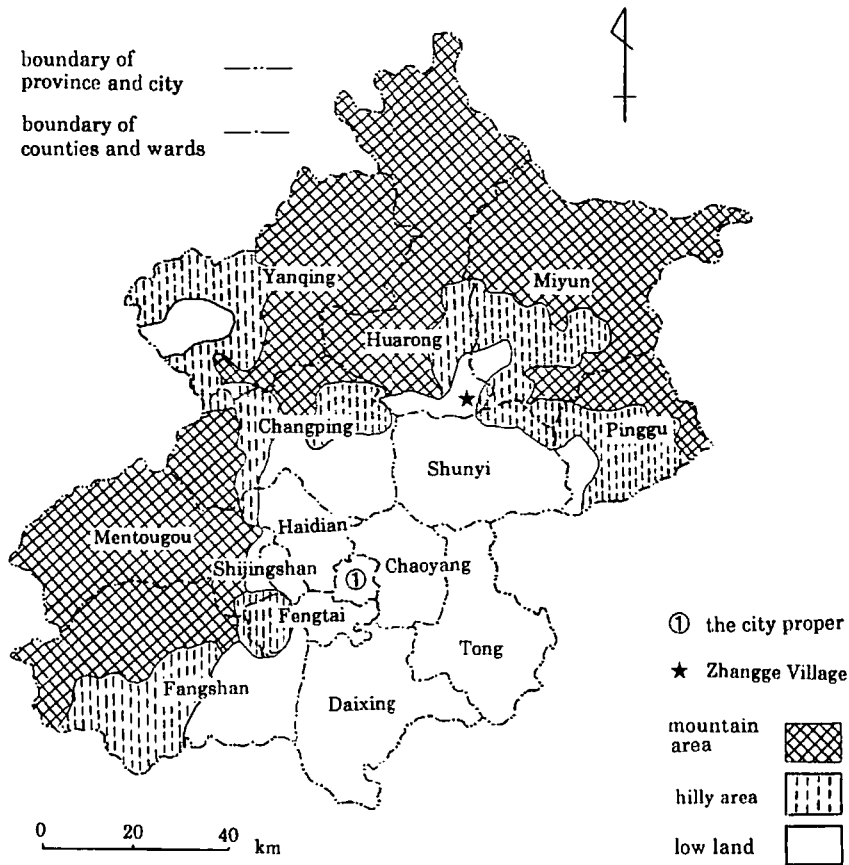


Fig. 1 Topographical conditions and the municipal zoning in Beijing City. Mountain area is higher than 800 m, hilly area is between 500 m to 800 m. The city proper includes Dongcheng, Xicheng, Chongwen and Xuanwu wards.

2. Changes Occurred in the Urban Fringe of Beijing City after Reform and Opening

Changes of agricultural production and land use

Since the reform and opening policy carrying on, agricultural production in Beijing suburbs has made great changes from "taking grain as the key link" policy to "taking measures suited to local conditions" policy. And adoption of double cropping system in this region promoted a high yield of grain production. Figure 2 shows the composition of farmland and crops in 1980 and 1995 respectively by counties. Main crops are wheat and corn, and others are sorghum and millet. There were mainly double cropping of wheat and corn in low and hilly land before twenty years. Vegetables had been cultivated in places which are close to the city proper. Especially, many areas in nearby suburbs were planned as

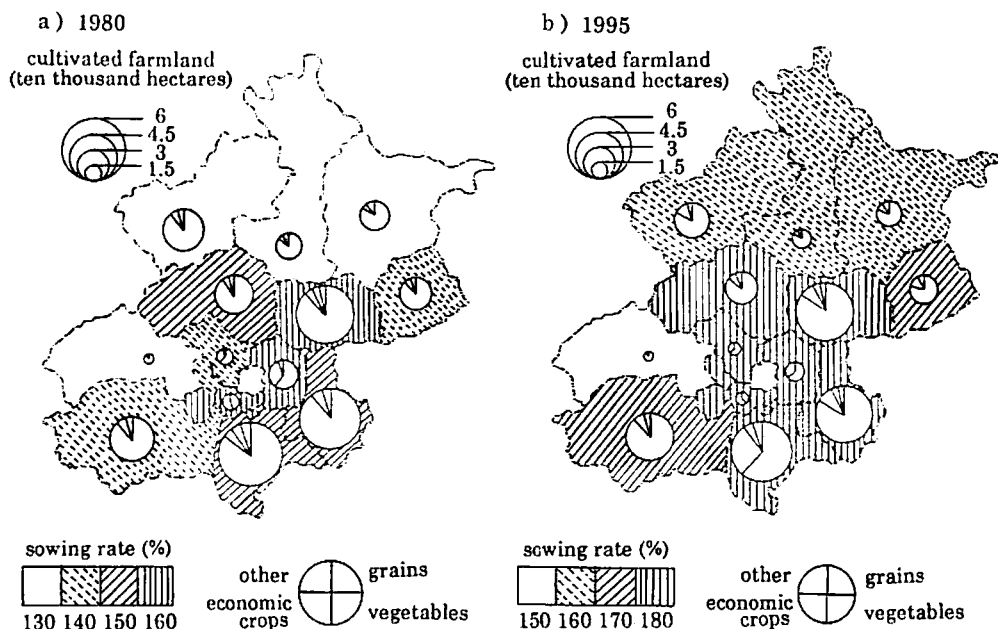


Fig. 2 Distribution of cultivated farmland and main crops by wards and counties in Beijing City (1980 · 1995). Economic crops include peanuts, cottons, oil crops etc. Data source: Statistical Yearbook of Beijing in 1981 and 1996.

bases to grow vegetables for supplying to the city habitants in the end of 1970's. But only three or four years later, these bases became smaller or even entirely disappeared because of the city proper getting to expand. Vegetable production in farther places have been grown up in recent years (Fig. 2).

The land use of Beijing City has passed two change periods after the reform carried out. The first period was from 1978 to 1983. During that period, the agricultural production was collectively managed in the people's commune system, and the vegetable growing was limited only to places close to the city proper. At other places grains were still cultivated and other crops were not allowed to be expanded. The artificial irrigation system was promoted in that period. The second period was after 1984. During that period, along with the people's commune system dismissed, a diversified economy in agricultural production was introduced. In low land areas grains were still cultivated as main crops. And some wasteland were turned into orchards or vegetable fields in this area. Cash crops were added in mountain and hilly areas.

Rural changes in the urban fringe of Beijing City

Changes of rural labor force

The agricultural population increased in most districts and counties of Beijing City, but in Chaoyang, Fengtai, Shijingshan, Haidian and Mentougou, it decreased in 1994 to less than that in 1980. As everyone knows, the registered household management is divided into urban

and rural sectors, which means that in the same household registration system, the increase of agricultural population is normal. The agricultural population decreased because of the peasants becoming urban population for reasons that the city proper is expanded and farmland is occupied in these areas. Although the agricultural population increases in Beijing City, the agricultural labor forces have been decreased. The decreasing rate in the nearby districts such as Changping county, Haidian, Chaoyang and Fengtai districts is high, and in the remote counties is low. The proportion of labor who engaged in agriculture is declined. This rate is normally under twenty percent. Most of agricultural labor are engaged in non-farm business.

Changes of agricultural management organizations

Dismissal of people's commune system in Beijing City was delayed because its agricultural production was relatively developed, especially in the suburbs. Rural officers thought the scale economy was a better style suited to these local conditions, and the municipal government also paid more attention to the scale economy. Moreover, most of villages adopted scale economy management in Beijing City (about 83 percent). Few of villages adopted agricultural production responsibility system. But there is a tendency that agricultural production responsibility system turning to scale economy in recent years.

Sample village selected

Based on the changes occurred in the urban fringe of Beijing City, in order to get more detailed analysis, the author went to survey in the region. There are three ways in calling the region out of Beijing proper. One is administrative suburb which is divided into inner suburb and outer suburb. The second is the suburb of metropolis classified by government departments of urban planning. It means rural areas out of the city proper and townships. And the third is normally called "suburb" which means the low land areas out of the city proper. The "suburb" of this paper is normally called "suburb". In this paper, the author selected Zhangge Village as the study area, which is located in the outer urban fringe of Beijing City. This village is a sample of villages which has adopted agricultural production responsibility system, and it is likely to be compared with villages where scale economy is carried on in the future. Through the survey and analysis to this village, the author hope to get a clear state of changing variety and its characteristic of change for the outer urban fringe, and further for the whole urban fringe of Beijing City.

3. Changes in Zhangge Village and its Characteristics

Zhangge Village is located in the southern part of Huarong County, 47 km far away from the city proper. The arable land of the village is in low land area. The northeast of the village is hilly land. There is rich ground water. Irrigation system has changed from river pumping to pump wells. Zhangge Village has good natural conditions and is suitable for growing many kinds of crops. The population is 946. Peasant families are 202 with 346 labor. During the period of people's commune, the farmland of Zhangge Village was 92 hectares. In 1995, the farmland was 91.3 hectares, of which 56.6 hectares were cultivated for grains (made up 62 percent of the total farmland), 28.7 hectares of vegetables (31 percent), and rest for melons and beans.

Table 1 Changes of population and agriculture in Zhangge Village (1978 to 1995)

	year	family	popula- tion	agricultural labor	cultivated farmland(hectares)				production of grains (thousand kilogram)	production of vegetables (thousand kilogram)
					total	grains	veget- ables	others		
The period of the people's commune	1978	182	985	301	92.0	69.7	2.9	19.4	291	60
	1979	182	979	306	92.0	69.7	3.5	18.8	326	72
	1980	187	970	317	92.0	69.4	3.7	18.9	312	79
	1981	191	972	315	92.0	70.7	1.4	19.9	387	16
	1982	194	948	356	92.0	68.9	2.5	20.6	379	37
	1983	194	959	373	92.0	73.8	1.6	16.6	431	92
	1984	196	971	373	92.0	73.9	3.2	14.9	393	95
	1985	194	971	370	92.0	57.8	16.4	17.8	473	461
	1986	192	971	372	92.0	56.7	14.1	21.2	582	457
	1987	192	971	369	92.0	58.0	16.7	17.3	546	482
The period fixing output quotas based-on the household	1988	192	971	374	92.0	58.0	16.7	17.3	673	481
	1989	192	971	378	91.3	58.0	24.6	8.7	713	896
	1990	201	958	372	91.3	58.0	26.0	7.3	723	997
	1991	203	957	372	91.3	57.2	28.1	6.0	742	997
	1992	207	953	367	91.3	57.3	28.7	5.3	703	1096
	1993	205	951	365	91.3	58.6	28.7	4.0	697	1160
	1994	202	950	363	91.3	55.3	28.7	7.3	723	1135
	1995	202	946	364	91.3	56.6	28.7	6.0	737	1120

Note: Labor include people between eighteen years old and sixty-five years old

Data source: Field survey

Changes of agriculture in Zhangge Village are shown in Table 1. During the period of people's commune, they produced almost only grain, while vegetables were just for their own consumption. A few areas of cotton, castor-oil plant, soybean, kidney bean and other kinds of vegetables were grown. After the people's commune dismissed, cultivated areas of grains were reduced and those of vegetables were increased. And due to extension of multiple cropping areas in the early 1980s, the productivity of farmland has been promoted.

After the people's commune dismissal, agricultural production responsibility system was introduced in 1984. The organization of village has turned into voting a village people committee for management from original vertical management through party branch of production brigade, production brigade, party branch of production team, production team until peasant households (Fig. 3). Village people can grow any kinds of crops as they like, only after they fulfil the fixed quotas of grains to the state.

The people's commune period

Before 1950, land was owned by individuals. Cultivating were determined by themselves. At that time, most people used one crop within a year or three crops within two years. They relied on rainfall for water. The output value was very low. Since 1950's, land ownership had turned to the state, farmland was improved and water conservation was constructed. Land use has increased. Zhangge Village expanded more farmland under influences of policies of land reclamation and turning into orchard and farmland in 1960's. Crops were readjusted and other food grains such as millet and sorghum declined in 1970's. Due to the introduction of frost-resistant, disease-resistant and high-yielding varieties of winter wheat and corn, the

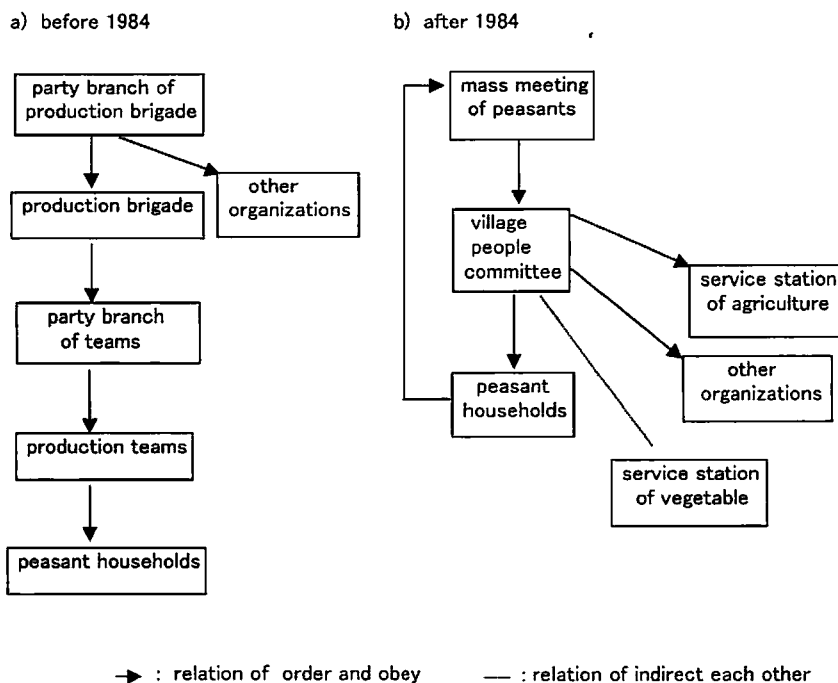


Fig. 3 Changes of organization of Zhangge Village. Data source: Field survey.

output value of grains has been risen by a big margin.

Cultivating of agricultural production and infrastructure of agriculture were decided by the production brigade in Zhangge Village before 1984. Production of food crops such as corn and wheat was 180 and 150 kilograms per unit area, so that agricultural productivity was very low in Zhangge Village during the period of people's commune (see Table 1). It was not poor technology. Peasants lost their working enthusiasm because of adoption of equilibrium distribution.

The reform and opening period

In 1981, there was a trial of contracting output quotas to peasant households with several families in each team of Zhangge Village. Since spring of 1984, they have undertaken all-round contract system (agricultural production responsibility system) accompanying with some measures. The first step was the distribution of arable land. They started with classifying the land into three grades according to: (a) soil fertility; (b) distance from living places; (c) watering conditions and (d) availability of cultivating crops other than grains. All village people including elders and children were distributed about 6.7 ares (one *mu*) of food grade land (in which 2.0 ares of first grade, 2.0 ares of second grade and 2.7 ares of third grade) and 0.7 ares of private plot for each. Rest lands were used as contracted land for families which had more labor force. The second step was distribution of production tools. They evaluated all tools that accounted for about thirty thousand yuan, then about thirty yuan for each people on the average. Peasants would discuss among themselves for a

compliment. The third step was distribution of public equipment. They counted the value of houses, livestock sheds and stores and then sold to peasant families (actually, these things were too old to sell out. They were used by the agricultural service station later). All the above mentioned distribution were going on equally, for instance, divided land by drawing lots.

There have been following changes in Zhangge Village after carrying out the all-round contract system to peasant households. The first change was that peasants have to took an obligation of grain production and paying taxes. The village administration does not involve any other agricultural production to maintain peasant household as an independent producer. Duties and obligation of a peasant household were as follows: (a) obligation to pay fees of distributed land usage (land tax) and to pay fees to the township government and agricultural tax and other charges; (b) obligation to sell a fixed quotas of grain to the state and preserved grain to the village and to work for capital construction of farmland. All village people aging from 18 to 65 for male and 18 to 55 for female have to attend over 10 days voluntary labor expect teachers and disabled persons. The second change was the administrative composition of the village. The village people committee was established after the production brigade dismissed.

However, some problems have appeared through the reform despite agricultural productivity raised. The first problem was segmentation and separation of production management. Since the land is divided evenly, one peasant family usually had about 40 ares. Normally, at the time, one labor could manage at least 67 ares of arable land. 40 ares was too small for a job according to labor ability. In addition, three grades of land were mixed and distributed averagely, so that each peasant family could get 1.4 to 13.4 ares of land, which scattered in three places. Because land was too segmental, it was impossible for farmers to operate agricultural machines. And irrigation was disordered. These have been more than twenty quarrels caused by watering during 1984 to 1987. About one third of the families were far from wells and hard to get watering.

The second problem was gaps of income among village people, and there was a trend of popularization. These gaps were mainly caused by numbers of labor in a peasant family and their working ability. Peasant family labor were principal factors of agricultural production, and number of labor was a key cause for the peasant family income in Zhangge Village. Therefore, large-scale families (those have strong labor and ability) were more powerful for agricultural production. In addition, peasants who have some skills of agricultural production will have more opportunities to make more money. About two third of families were small-scale (less labor and low income) in Zhangge Village, and their labor productivity and income are lower than those of large-scale families.

The third one was the dismissal of agricultural service organizations (hydro station, farming machinery station) which were used in period of people's commune, and their functions were dismissed. Because this village adopted agricultural production responsibility system, farmlands were all divided to peasants with small pieces so that the rural organization became weak in 1984. The infrastructure of agriculture had not been conducted for about four or five years. Village people did not expect to solve above problems through several peasant households. To solve these problems, it was necessary to emphasize collective power and reduce "individuality" in order to reach a real "rich together". Village

people committee decided to establish a service station of agriculture.

Staff of the agricultural service station had 10 people in the beginning 1989. More than 95 percent of farmland such as corn and wheat were cultivated by farming machines. Organization of the agricultural service station is shown in Fig. 4. All staff were local village people. They took care both their own businesses and work at the station. The service station of agriculture was working under guidance of the village people committee, and the village people committee appointed its director and accountant. Income of the agricultural service station was mainly from peasant households who used services of the station. Worker's salaries were determined by the working hour and load.

The first activity achievement of the agricultural service station was that it combined plowing and cultivating in one work. The village people committee redistributed all land of the village to make it more rational in 1990. This can be seen from Fig. 5, the land use map. Secondly, village people worked more effectively. It took about one month to finish from plowing to sowing before 1987. It took no more than two weeks after 1989. By using public watering system, water quantity, watering time and expense were saved. The effectiveness is raised. Thirdly, due to inter-cropping system adopted (*i.e.* vegetables or corn in wheat

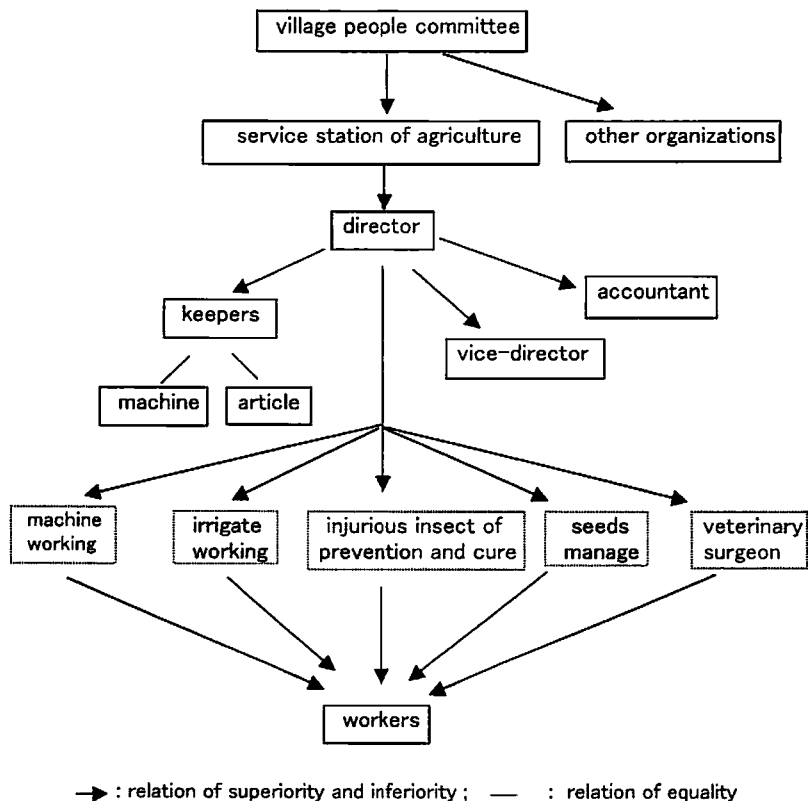


Fig. 4 Organization of agricultural service station in Zhangge Village. Data source: Field survey in August, 1997.

field), land use was more effective than formerly. Productivity of agriculture has increased because adoption of machinery work and irrigation made more labor released, so that they can put more efforts to highly intensive vegetable production.

The socialistic market economy period

Since 1990, they have adopted a unified cultivation management after negotiation among village people, such as machinery use and irrigation. Figure 5 shows the current land use of Zhangge Village. According to this figure, we can see that the land has been reconstructed. This was reorganized in 1990 when the service station of agriculture was established for convenient machinery use and rational watering.

In this period, characteristics of Zhangge Village have been changed by the service station of vegetable. Village people decided to set up a service station of vegetable because they could get more income from vegetable production. In actual fact, peasants have put in a lot of efforts to vegetable growing since 1984 because peasants thought that vegetable growing was an important income source. According to the survey, high input vegetable growing could be expanded mainly because of activities of the agricultural service station. Moreover, there are population increase and expansion of the county town (the World Women Conference was held here) which is about five kilometers far away from Zhangge Village. This is a reason that Zhangge's vegetable growing could be expanded.

However, there were some problems in vegetable growing before establishment of the vegetable service station. The first one was backward technology of vegetable growing. They produced vegetable on open plots with low output and quality. They grew varieties of such as leeks, cabbages, green onions were just for self-consuming. They sold very few to vegetable markets and always not in time. The second one was delivery and sales to markets. Peasants sold their vegetables only through a traditional fair (where people were gathered every five days) before the service station of vegetable was set up. It was difficult to deliver toward the city proper. Furthermore, selling vegetables took at least a whole day of labor. It was a too much burden for less-labor peasant families. The third one was purchase of production materials. It was difficult for peasants to get production materials, such as chemical fertilizer and pesticide in stabilized prices, supplied by the state. They had to buy them in the markets, where not only the price was higher, but also they were sometimes deceived. And it was more difficult and expensive for peasants to buy plastics for vinyl houses.

It is hard to solve those problems mentioned above by peasant households individually. It should be relied on collective strength to expand vegetable growing and raising income from it. This is the basis of establishment of the vegetable service station. There are following achievements of the vegetable service station. First, production technology has been promoted. The station invites experts in vegetable growing regularly to direct members' to extend sheds like vinyl houses to grow vegetables whole year and to get fruits earlier which leads to good sales prices. Second, new variety of vegetables have been introduced. The station tests new variety of vegetables first and gets a successful one to extend to members. At the same time, the station buys seeds from seed station of county in a wholesale price then sells to members in a low price. Third, production materials are supplied by the station. This could save member's time and money. Fourth, unified irrigation is adopted. The station asked for agreement of members to assemble the segment plots for

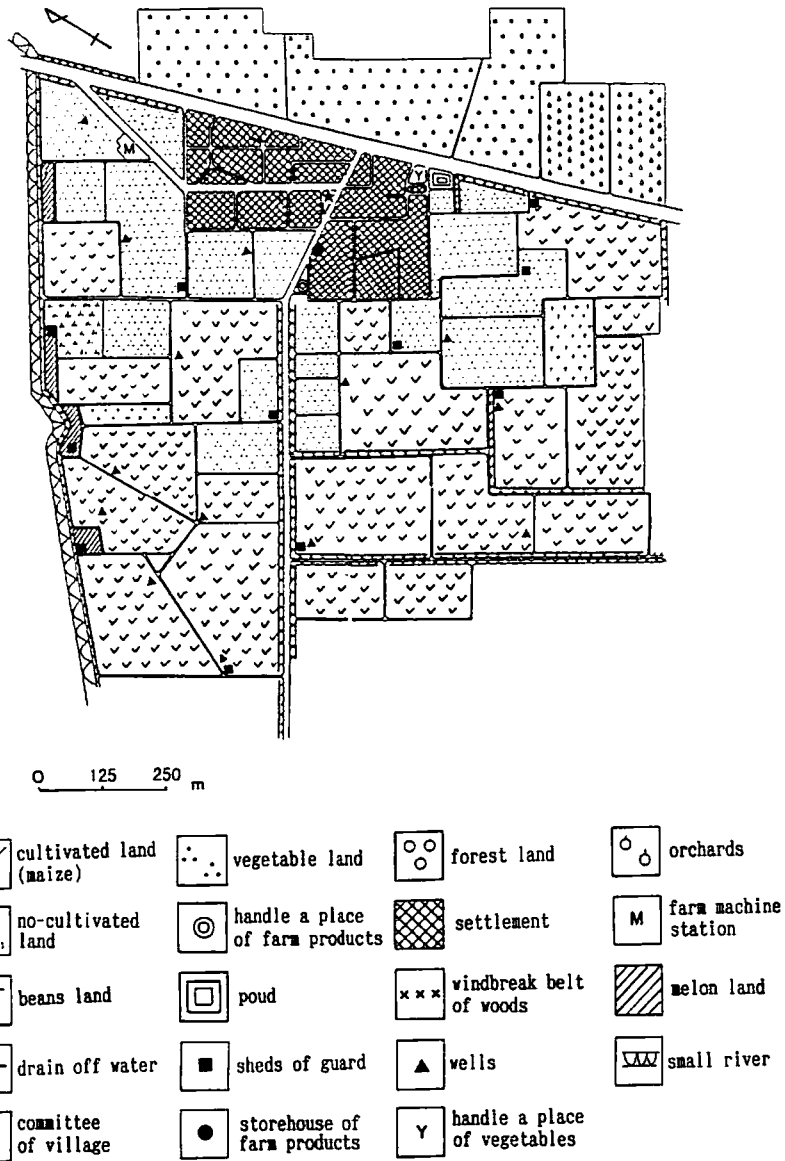


Fig. 5 Land use in Zhangge Village. Data source: Field survey in August, 1997.

unified cultivation and management. Fifth, vegetables are sold in common. Loss of vegetables is reduced and time of selling is saved.

Table 2 is a sample survey of peasant households in Zhangge Village. Peasant household's management are similar: the main products are grains and vegetables; management size and family size with number of labor are in a direct proportion. No. B and

Table 2 Farm management of peasant households in Zhangge Village in 1996

peasant families	member of family		farmland(are)		cultivated farmland(are)				orchards (are)	other (are)	cows, mules
	the number of person	the number of labor	owned farmland	leased farmland	wheats	maizes	vegetables	other grains			
A	4	2	30	30	54	42	18	0	0	12	1
B	6	4	42	78	96	60	60	0.6	0	18	2
C	5	2	36	30	60	48	18	0	0	1.2	1
D	3	2	24	30	42	42	12	0	0	0	0
E	2	2	18	30	36	42	12	6	60	18	0
F	3	3	24	36	48	60	12	0	120	12	1
G	7	5	60	60	72	66	54	6	0	18	2
H	4	2	30	30	48	48	12	0	0	0	1
I	4	2	36	30	60	48	18	0	180	6	1
J	3	2	24	30	42	48	12	1.2	0	12	1

Note: Labor include people between eighteen years old and sixty-five years old

Vinyl house is included

Data source: Field survey

No. G peasant households have more labor, and they have larger areas of vegetable field besides wheat and corn. Despite vegetable growing could make more income, it needs more inputs. For small-scale peasant households, they keep a small size of vegetable growing and expand grain areas that need less labor and inputs. In addition, the state raised purchase price of grain in recent years, that promoted initiatives of peasants growing grain crops. There are some peasant households that conduct orchards two years ago. The fruits will bear three years later. Those peasant households who contracted in fruit trees have a very good expectation.

Table 3 is management condition of No. B peasant household in Table 2 in 1996. There is some difference from other peasant households in the amount of incomes, but items of income and expenses are almost the same as other peasant households. There are certain gaps of income among peasant households of this village. Although the average annual income for each labor is almost the same, his family income is different from income of other peasants. Peasant families have got more cash income with growing vegetables. Per capita income of Zhangge Village in 1990 was over thousand yuan. Sixty percent of peasant families got more than ten thousand yuan of income in 1996. It is no doubt that agricultural production responsibility system has put rural economy forward and improved peasant living standard greatly.

4. The Process of Rural Changes in Zhangge Village

The author made an analysis on the changes occurred in Zhangge Village after the reform and opening carried out through its land use and agricultural production and concluded in Table 4. After the reform and opening, the changes in Zhangge Village have passed three periods: in the beginning of the reform, peasants planted mainly wheat and

Table 3 Farm management of a sample peasant household in Zhangge Village (No. B in Table 2)

family condition	area of farmland	income (Yuan)	pay(Yuan)		
			taxes	cost for grains	cost for vegetables
father:	120 ares	wheat:	agriculture tax:	chemical ferti-	seeds:
60 years old	(78 ares is con-	6,500	400	zers: 2,600	1,500
mother:	acted with village)	maize:	turn over money:	pesticide:	fertilizers:
58 years old	sowing area:	4,500	600	800	2,000
son:	wheat:	vegetables:	education develo-	plough fee:	pesticides:
34 years old	96 ares	25,000	ping fee: 300	160	1,200
son's wife:	maize:	melon:	build road fee:	furrow: 28	irrigate fee:
32 years old	60 ares	8,000	600	sowing: 57	840
grandson:	vegetables:		land rent:	reap: 117	for service
10 years old	64 ares		400	thresh: 260	station of
grandson:	other grains:		accumulation fund	irrigate fee:	vegetables:
8 years old	0.6 ares		of village: 300	234	700
	melon:		others:	carry fee: 80	
	18 ares		1,270	others: 340	
labor: 4 people		total: 42,000	total: 14,786		
livestock: cow, one, mule: one					

Data source: Field survey

corn, only few vegetables. They had low income and uniformly distributed one by the village.

Agricultural production responsibility system was adopted during the reform and opening period. Peasant households have been more free to have diversified management only after fulfilling the fixed quotas of grain production. The organization turned from the production brigade into the village people committee. Keeping production of wheat and corn, vegetable growing areas were expanded, so that peasant family had more cash income. But, in the same time, because the land was segmented and scattered, machinery use was impossible and the income gap became wider among peasant households. For solving these problems, an agricultural service station was established. The land was therefore readjusted to raise mechanization and irrigation efficiency.

In 1990, it went to the socialistic market economy period. A vegetable service station was organized among peasant households during this period. This station solved not only problems of vegetable growing, but also transporting it to marketing. In this period, the village people committee had reorganized the farmland to suit assembly irrigation and machinery use, and it took consequence that a good foundation of expanding vegetable growing areas was made.

Zhangge Village is rural in landscape of countryside and surroundings. It is away from the city proper of Beijing, so there is no township and village enterprises at all. Peasant households put their all efforts to the production of crops in order to improve their living standard and raise their incomes. In addition, the village does not belong to a grain production base area, so that it is possible to make growth on vegetable growing because these is no cultivating limitation of agricultural production.

Table 4 Conditions of rural changes and their characteristics in Zhangge Village

item		The people's communes period (before 1984)	The reform and opening period (1984~1989)	The socialistic market economy period (after 1990)
farm land	main crops	wheats, maizes, millet, sorghum, vegetables(little)	wheats, maizes, vegetables, melons	wheats, maizes, vegetables, melons
	land use	one harvest crop in a year	two harvest crop in a year vegetables is two harvest in a year	two harvest crop in a year vegetables is three or four harvest in a year
	land productivity	low	higher	highest
	farmland base	unprepared	began to be prepared	prepared
labor	labor intensive	higher	higher	higher
	mechanization	stock	stock	farm mechnery
agricultural management	the ownership of farmland	village-owned(state)	village-owned(state)	village-owned(state)
	management model	collective production team as an unit	individual	individual
	agricultural products traffic	government (government list price)	government (government list price and negotiated price)	government (government list price and negotiated price)
rural organization	agriculture	party branch of a production brigade, production brigade, party branch of teams, production teams, households	village people committee→households (service station of agriculture)	village people committee, households (service station of agriculture, sevice station of vegetable)
livelihood	income distribution	distributed by village	incomes from crops by household	incomes from crops by household
	working spot	arable land	arable land	arable land
	landscape	rural	rural	rural
	life style	rural	rural	rural, urban
	living level	lowest	high	higher

5. Conclusions

As mentioned above, the author surveyed and analyzed Zhangge Village which is located in the outer urban fringe of Beijing City. In this section, the author intends to conclude and sum up what have happened in this region, and raise subjects of future. After the reform and opening, the agricultural production system of the urban fringe of Beijing City has turned

from keeping grain production as a key link to diversified economies. The adoption of double cropping has led to the higher productivity of agriculture. On the other hand, despite township and village enterprises play very important roles in rural development, one could be prosperous if one relies on collective strength and wisdom, and grip market demands of agricultural products in region which has less or no township and village enterprises. Zhangge Village is a good example.

Zhangge Village has established agricultural production responsibility system after the people's commune system dismissed. Although there were some achievements, problems accompanied. The establishment of agricultural and vegetable service stations and adoption of cooperated production have solved problems such as irrigation and machinery uses in dispersed and small land tenure. Meanwhile, suitable foundations for expanding vegetable growing have been laid on. In terms of Zhangge Village, the author identified some factors of rural changes. In these factors, changes of national policies played the most important role in changes of the urban fringe of Beijing City, because peasants have got many benefits from circumstances of market economy on agricultural activities since the reform and opening. Meanwhile, there are also influence of external factors as industrialization and urbanization interacted with internal factors such as agro-technical advance and changes of life styles of peasant families.

For variations in this region, we should consider its natural conditions, various guidance to various regions, various policies for grain production base areas and non base areas, various development for township and village enterprises in distance from the city proper. And how peasant households treat these differences are future subjects.

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