

An Analysis on Formation and Function of Farmer Middlemen in Strawberry Production

A Case Study in XT Village of Hangzhou City, China

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Abstract

This paper describes the formation and function of farmer middlemen in the strawberry growing area of a Chinese village (XT village). The farmer middlemen in this village, who are sons of strawberry growers, contribute to the distribution of strawberries in two ways. The first is a single family management and the second a multi-family management formed by several families. Farmer middlemen purchase strawberries from growers and sell them in the wholesale markets of consuming areas. Compared to consuming area-initiated middlemen, farmer middlemen use XT village as a base for their operation, and create the routes for strawberry distribution from the growing to consuming areas. Farmer middlemen, who hold more than 80% of the market in strawberry distribution in Jiande Strawberry Wholesale Market located in XT village, have fulfilled a very important function in the distribution process.

Key words: farmer middlemen, single family management, multi-family management, producing area-initiated middlemen.

I Introduction

Along with the reforms and open-door policy started in 1978, great changes have taken place in agriculture of China¹. Thanks to this policy, Chinese farmers can now produce many kinds of cash crops instead of only grain crops, and land in new crops has been increasing gradually. On the other hand, the original agricultural trading and distribution system under the framework of a government monopoly system has disintegrated. The development and strengthening of a new distribution system for agricultural produce, orientated to a market economy, is very slow. At the same time, many government-managed vegetable and fruit enterprises have become bankrupt. So, under these circumstances, farmers in new producing areas are facing problems in selling their produce. An improved distribution system is required for cash crops in new producing areas.

Studies on distribution of vegetables and fruit after reform in China have been undertaken by Wang Zhigang, Oshima Kazutsugu, and others in Japan. Wang Zhigang analysed the activities of Cooperative Associations in transportation and sale of agricultural produce in Dazhong Temple Wholesale Market of Beijing². Beijing is one of the biggest agricultural markets in China. Cooperative Associations located in Dazhong Temple Wholesale Market of Beijing, purchase fresh vegetables from all over China and sell them in this market. Transport of fresh vegetables is undertaken by a high proportion of Cooperative Association Members. Oshima Kazutsugu investigated an apple growing area at Liqian county of Shanxi province and analysed the function of middlemen from producing and consuming areas who were named “Guohang” and “Guoshang”³. “Guohang” only purchase apples from growers if they get orders from “Guoshang” in wholesale markets in consuming areas. In reality, purchasing activities of “Guohang” depends on “Guoshang”. Wang Zhigang and Oshima Kazutsugu conducted studies on consuming area-initiated middlemen but they did not clarify the parentage, former professions and formation of the middlemen in

their studies.

This study analyses farmer middlemen⁴ from the producing area in XT village, Hangzhou city, who sell to consuming areas. Huang Zuhui (2005) identified the existence of farmer middlemen but did not clarify their formation and function thoroughly⁵. Farmer middlemen in XT village are separate from the strawberry growers. They purchase strawberries and sell them in the wholesale markets of consuming areas. They rely on transport firms to carry the strawberries to consuming areas. The attributes above are the main features of farmer middlemen. Compared to consuming area-initiated middlemen, farmer middlemen use XT village as a base for their operation, and create routes for strawberry distribution to the consuming markets. So, the purpose of this paper is to clarify the formation and function of farmer middlemen based on field investigations in XT village. This paper emphasizes two aspects of farmer middlemen — the first, their formation based on the development of strawberry production and distribution, and second, it highlights the function of farmer middlemen through systematically analysing their business activities.

II The formation of farmer middlemen

2.1 General situation of XT village

XT village is situated in Jiande county of Hangzhou city. It is located on both sides of National Road 320 along the Xinan River and is 110 km from Hangzhou city. This village has carried out a “Household-based Family Contract Responsibility System” since 1983. Under this system, every farmer is allocated 0.81mu⁶ of land. In the 1980s, the major crops grown in this village were paddy, wheat and rape. In the early 1990s, the area of strawberry production expanded rapidly.

2.2 The development of strawberry production, distribution and the formation of farmer middlemen

Farmers in XT village started to plant strawberries in paddy fields in 1983 on an

experimental basis. There were only 5 mu of strawberries up to 1989. At that time, the main markets were on the both sides of National Road 320 and in a county town named Xin Anjiang. Along with rapid advancement of the market economy in China, the agricultural produce distribution system has been developed, and production of strawberries has also expanded rapidly. There was a sharp increase in the number of new strawberry growers in the period 1992-96. The area and yield of strawberries in XT village in 1996 reached 1,020 mu and 1,337 tons respectively almost 34 times and 37 times greater than in 1992. For that, XT village became famous as “the first strawberry village in Zhejiang Province”. Giving special importance to this village, the former vice-premier, Mr WEN Jiabao visited it in 1995.

Table 1. Strawberry Growing Area and Yield in XT Village and Jiande County (Unit: Mu, Ton)

Year	Jiande County		XT Village		The Share of XT	
	Producing Area	Yield	Producing Area	Yield	Producing Area(%)	Yield (%)
1990			5	5		
1991			12	13		
1992			30	36		
1993	692	258	131	154	18.9	59.6
1994	1,679	1,040	412	504	24.5	48.5
1995	3,142	2,362	712	961	22.7	40.7
1996	5,399	5,474	1,020	1,337	18.9	24.4
1997	6,895	8,841	1,020	1,255	14.8	14.2
1998	6,728	9,553	1,000	1,300	14.9	13.6
1999	7,885	12,471	1,000	1,300	12.7	10.4
2000	10,194	15,525	780	1,088	7.7	7.0
2001	11,684	18,015	748	1,071	6.4	5.9
2002	11,820	19,325	720	1,012	6.1	5.2
2003	12,668	19,410	708	968	5.6	4.9

Source: Jiande Statistical Yearbook (1991~2005), and Data from XT Village People's Committee in May, 2005.

Table 2 Selling Quantities in the Wholesale Markets of Main Consuming Cities (Unit:Ton)

Year	Beijing	Tianjin	Qingdao	Nanjing	Shanghai	Hangzhou	Wenzhou	Others	Total Quantity
1999	801.5	1,050.1	1,500.8	2,510.2	1,020.1	1,786.2	850.7	1,704.3	11,223.9
2000	1,002.7	1,478.0	2,118.4	2,378.4	815.2	2,012.4	1,504.2	2,508.0	13,817.3
2001	1,238.4	2,010.8	3,010.5	2,460.0	500.4	2,158.9	1,203.1	5,420.4	18,002.5
2002	815.2	2,100.5	3,218.7	2,350.5	452.3	1,723.0	1,590.5	4,529.4	16,880.1
2003	377.0	736.0	4,232.0	1,992.7	193.0	1,576.7	647.0	3,509.3	13,263.7
2004	613.3	3,908.2	2,232.7	2,834.0	59.0	2,125.5	1,494.0	4,188.8	17,455.5
2005	1,070.0	1,840.0	858.0	1,997.6	212.0	3,102.5	848.0	1,717.6	11,645.7

Source: Management Office of Jiande Strawberry Market and XT Village People's Committee in May, 2005.

Along with the rapid growth of strawberry production, enlarging the consumer market became an important need. But as a new cash crop in this region, there was a lack of distribution routes leading to the consuming areas, especially the big cities. Strawberry production was undertaken by many small farmers, with an average of only 2-3 mu land. They had no co-operative organization for marketing, so had to develop their own distribution routes. In 1994, farmers developed a route to Wenzhou city, the economy of which was developing rapidly. Next year, they developed routes to other big consuming cities in the coastal area, such as Hangzhou and Nanjing. Then followed the markets of big cities like Beijing, Tianjin, and others. During the period when strawberry production was expanding, farmer middlemen who held 2-3 mu of land for strawberry production became distributors for the crop⁷).

The commencement of strawberry growing in XT village lead to growth by farmers in Jiande county. Strawberry planting has been extended from XT village to the whole county (Table 1). With the expansion in production, the distribution routes from XT village to the main coastal cities of China have been established step by step (Table 2). In order to stabilize purchasing and selling activities, Jiande Strawberry Wholesale Market has been operated regularly in XT village from 1999. Thus, with the establishment of a marketing system, the number of farmer middlemen has increased and the purchasing area widened to the whole county.

III Distribution routes for strawberries, composition of farmer middlemen and their business activities

3.1 Distribution routes of farmer middlemen

Figure 1 shows the strawberry distribution routes from XT village used by farmers, farmer middlemen and others. There are two routes and two kinds of middlemen – farmer middlemen and the middlemen from outside areas (Figure 1).

The farmer middlemen are the principal distributors in XT village, where the routes have gradually been set up after the establishment of Jiande Strawberry Wholesale Market. Farmer middlemen distribute 80% of the crop. In every strawberry harvest season (from the beginning of December to the end of April), farmer middlemen purchase strawberries and sell them in consuming areas. Strawberries deteriorate when it turns hot at the end of the harvesting season. As a result, they must be kept fresh and need quick transport to the markets. As the farmer middlemen cannot transport strawberries to the far distant markets as they have no cold storage facilities, they sell them to food-processing companies near Hangzhou city for jam and canned food.

The other distribution route is formed by the middlemen from outside areas. They started to purchase strawberries in XT village after Jiande Strawberry Wholesale Market was established in 1999. But these middlemen don't have any blood relationship or intimacy with the strawberry growers in XT village. Usually they purchase strawberries from Jiande Strawberry Wholesale Market and transport them to consuming areas for sale. The number of middlemen from outside areas has been decreasing in 2006.

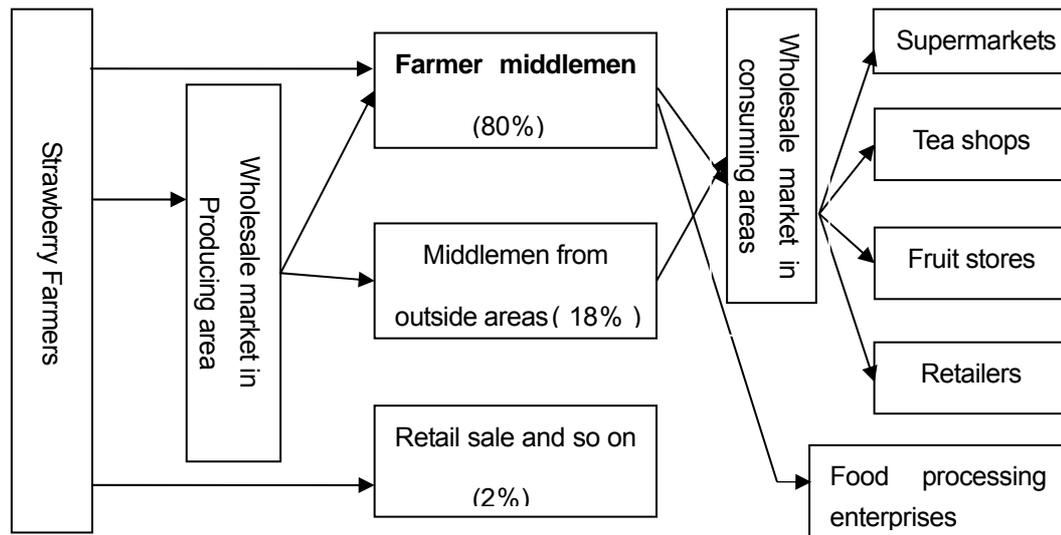


Figure1 Strawberry Distribution in Jiande Strawberry Wholesale Market of XT Village

Source: Field survey (Aug. 2004 , May 2005)

3.2 The composition and types of farmer middlemen

At present, 302 farmer middlemen in XT village market 80% of the strawberries in the Jiande Strawberry Wholesale Market. Most of them are family members, relatives or friends based on blood relationship or intimacy. Initially, most farmer middlemen were also growers. With the expansion in selling areas and quantities, some growers gradually gave up strawberry production and began to specialise in commercial activities like purchasing and selling. They are all middle school graduates and have some experience in the big cities. Usually, they have funds for business operations and are rich in commercial experiences. They are also capable of capturing market information and can analyse the quotations on the market.

The types of farmer middlemen, generally, can be divided into two. The first is a single family management and the second a multi-family management formed by several families (Table 3). The former is mainly composed of couples with selling focused in Hangzhou, Nanjing, and other nearby cities. The latter was initiated by experienced farmer middlemen, who invite their relatives or friends to set up a multi-family management at the beginning of each harvesting season. The latter's sale areas are usually in the

distant cities, such as Beijing, Tianjin, Qingdao, and other consuming cities. Usually at least one member stays prominently in the selected consuming market during the strawberry harvesting season. In relation to funds, every family provides about 10,000 to 20,000 RMB. Multi-family management arrangements have more capital than single family management because they are formed by a number of families.

In relation to profit sharing, it is very simple for single family management because it is their own business. However, multi-family management distribute profits to members based on capital investment. Businesses operate for only half a year during the strawberry harvesting season. The members of multi-family management arrangements join together only during the strawberry seasons. The leader of every multi-family management returns all the capital investment to the members at the end of every season.

3.3 The purchasing activities in the producing area

Purchasing and selling activities of farmer middlemen are analysed in detail (Table 4). In many cases, male members undertake selling in consuming areas. Farmer middlemen don't possess enough funds to purchase transport trucks and rely on carriers to transport strawberries to consuming areas⁸. Strawberries are packaged in bamboo baskets for transport to Hangzhou, Nanjing and nearby cities. Wooden boxes and plastic cases are used for transport to far away cities, such as Beijing, and Tianjin.

Table 3 Types of Farmer Middlemen

Type	Involved persons/family	Composition	Status of staying in consuming areas	Selling places	Investment(RMB)	Sharing of Profits
Single family management	2/1 family	A couple	Daily moving	Hangzhou and other nearer cities	10,000-20,000RMB	Self-decision
	2~3/1 family	Family members	Staying prominently	Nanjing and other nearer cities	10,000-20,000RMB	Self-decision
Multi-family management	>2/2 ~ 4 families	Families, relatives, friends, etc	Staying prominently	Beijing and other distant cities	>10,000RMB/family	Group-decision
	>5/>5 families	Families, relatives, friends, etc	Staying prominently	Tianjin and other distant cities	>10,000RMB/family	Group-decision

Source: Field survey (Aug. 2004 , May 2005)

Table 4 General Scenario of Farmer Middlemen

Types of Management	Sl. No. of Farmers	Composition	Selling place	Distance (Km)	Transport	Load figure	Representative(s) in producing area	Representative(s) in consuming area
Single family management	№1	Husband and wife (2persons)	Hangzhou Fruit Co Ltd	135	Commission	Bamboo Basket	Wife	Husband
	№2	Husband and wife (2persons)	Hangzhou Gengshanmen Fruit Co Ltd	135	Commission	Bamboo Basket	Wife	Husband
	№3	Husband and wife (2persons)	Nanjing Xiaguan District Fruit Wholesale Market	480	Commission	Bamboo Basket	Husband	Wife
	№4	Husband, wife and son (3persons)	Wenzhou Jiangjunqiao Fruit Wholesale Market	360	Commission	Bamboo Basket	Wife, son	Husband
Multi-family management	№5	Relatives(3 Families) (3persons)	Beijing Minguangshi Fruit Wholesale Market	1,600	Commission	Plastic case	Leader, friend	Leader's Brother (1 person)
	№6	Friends(2 Families) (4 persons)	Tianjin Hongqi Fruit Wholesale Market	1,400	Commission	Wooden box , Plastic case	Leader (a couple)	Friends (2 persons)
	№7	Relatives and friends (5 Families/10persons)	Tianjin Wuxing Fruit Wholesale Market	1,400	Commission	Wooden box , Plastic case	Leader, relatives, friends	Leader's Brother (2 persons)
	№8	Relatives and friends (10 Families/17persons)	Qingdao Changlelu Fruit Wholesale Market	1,100	Commission	Wooden box , Plastic case	Leader, relatives, friends	Friend, relative (2 persons)

Source: Field survey (Aug. 2004 , May 2005)

For single family management, purchasing and selling are done by family members. Growers sort their strawberries according to size and quality and then they are put into bamboo baskets. Growers carry their strawberries to Jiande Strawberry Wholesale Market for purchase by single family management operators. Transport firms load the baskets on to trucks and deliver them to consuming areas. Some single family operators purchase strawberries from farmers yards. Buyers usually pay in cash and exchange empty baskets with the farmers. In this way the quantity of strawberries they wish to purchase next day can be guaranteed. For this activity, single family operators usually hold 2,000 to 3,000 baskets to be used between the producing area and consuming area again and again. The representative in charge of selling in a consuming area always puts the empty baskets used last day in order and sends them back to the producing area when the transporters return to that producing area.

Multi-family management comprises two or more families (more than two members). Apart from members in charge of selling in consuming areas, all other members are responsible for buying strawberries in the producing area. Multi-family management has a lot in common with single family management in purchasing strawberries. But, it is possible for them to purchase in larger quantities as they have both more members and funds. They visit nearby villages and purchase strawberries in farmers' yards. Multi-family management usually sell strawberries in the wholesale markets of the distant cities like Beijing and Tianjin. They pack strawberries in wooden boxes or plastic cases to prevent damage during transport. And then, they hand them to carriers to transport them to their members for sale in the wholesale markets. Transporters send the empty boxes or cases back to the producing area.

As described above, taking the producing area as the base, farmer middlemen purchase strawberries from individual farmers in Jiande Strawberry Wholesale Market or farmers' yards. Farmer middlemen transact with scattered and small-sized strawberry farmers.

3.4 The selling activity in consuming areas

Every farmer middleman chooses only one wholesale market according to the selling situation last year and market demand. During the strawberry harvesting season, sale representatives stay in the wholesale markets of consuming areas prominently. For single family management, except those who sell in nearby cities (going and returning the same day), one member of the family undertakes selling and stays in the consuming area prominently. However, multi-family management is quite different. The members hold a meeting to select and send one or two members to go to the chosen wholesale market in the consuming area. The selected members stay there prominently and undertake the selling in the selected wholesale market till the end of the strawberry harvesting season. The sale representatives decide their sale price based on the cost and the average sale price in the market (of course, the profits they expect are also included). The sale representatives of both categories usually sell for cash to retailers, fruit stores, tea shops and supermarkets. Then the cash is posted to members in the producing area as funds to purchase more strawberries.

The sale representatives in consuming areas also contact the members in the producing area by telephone. Everyday they exchange information on market prices, sale situation, and then decide the quantity to purchase for the next day.

IV The function of farmer middlemen

The farmer middlemen, not only purchase strawberries and sell them in the wholesale markets in consuming areas, but also play a key role in the distribution of fruit and vegetables. The Cooperative Association as shown by WANG Zhigang, purchases vegetables from all over China, and sell them only in Dazhong Temple Wholesale Market of Beijing. Compared to this, a farmer middleman purchases strawberries only from his hometown, and sells them in one wholesale market. One further point of difference is that farmer middlemen use carriers to delivery their strawberries while many members of

the Cooperative Association undertake their own transport. In addition, farmer middlemen are engaged in purchase and sale of strawberries only for about half a year in the harvesting season. As a result, the members of multi-family management groups change from season to season.

The main functions of farmer middlemen can be summarized as follows:

4.1 Purchase and sale

Farmer middlemen assign their members to the producing and consuming areas. Apart from members responsible for selling in consuming areas, all the others specialize in purchasing from farmers. They purchase strawberries from farmers directly for cash in Jiande Strawberry Wholesale Market or in farmers' yards.

Farmer middlemen, who are all local farmers, have blood relationship or intimacy with strawberry farmers in XT village and can be relied upon to purchase the strawberries each harvesting season.

Sale representatives in wholesale markets do not change their selected markets even if other markets provide higher prices. It is impossible for farmer middlemen to change their selling markets frequently as they do not have enough funds and labour resources like shipping middlemen⁹ who take advantage of markets where prices are higher.

4.2 Decisions on price setting

Farmer middlemen set selling prices according to market trends in consuming areas. Prices in wholesale markets in consuming areas greatly influence prices paid to growers. Purchase prices change daily. However, farmer middlemen who both buy and sell and do not rely on others to purchase strawberries for them, save on commission. At this point, farmer middlemen have an advantage over middlemen from consuming areas (such as "Guoshang")¹⁰ in pricing. To be on good terms with small retailers in consuming areas, they sometimes sell at less than average market prices. Besides, farmer

middlemen settle accounts in cash, which is beneficial to withdrawal of currency. They rely on carriers to deliver the goods for them. So, the problem of lack of funds can be relieved to some extent.

4.3 Pricing and information exchange

As outlined above, single family operators undertake selling activities in the nearby cities sending baskets filled with strawberries to consuming areas. Multi-family management purchase larger quantities of strawberries and grade them into three sizes - small, medium and large. Then they pack them into wooden boxes or plastic cases. Farmer middlemen can adjust the purchased quantity, buying and selling prices, based on the market information exchanged between the producing area and the wholesale markets in consuming areas.

V Conclusion

This study has analysed farmer middlemen from XT village, Hangzhou city. It has examined the formation and function of farmer middlemen, who are indispensable to distributing strawberries from this village.

Compared to the consuming area-initiated middlemen reported by other studies, farmer middlemen, who make their village as a base, have created routes for strawberry distribution from producing to consuming areas. They can be seen as producing area-initiated middlemen. Associated with the development of strawberry production in XT village, farmer middlemen have identified with the growers (who hold 2~3mu of land), and become the important distributors in the market economy. Farmer middlemen have already demonstrated their initiative in strawberry distribution in XT village. They have played a very important role in the development of this area.

Farmer middlemen purchase strawberries from large numbers of small growers, and simultaneously sell only in one wholesale market in a selected consuming area. All activities are carried out by members of a single family or the members of a multi-family management. Furthermore, farmer middlemen

are involved in preparation for marketing such as, classification, packaging, and so on.

Scattered and small-sized farmer middlemen face many problems, such as, lack of funds, problems in keeping up to date with changing markets, and so on. Earnings from cash sales are used as capital to fund purchases. That is to say, the capital turnover is very fast. Farmer middlemen do not have enough capital to buy trucks and rely on carriers to deliver goods for them. In this way, they make the full use of their limited capital in their buying and selling activities.

However, farmer middlemen's activities are restricted to only half a year because of the seasonal nature of strawberry production. They undertake rice production for their own consumption in the other half year. The members of multi-family management work together as a group only in the strawberry harvesting season. They distribute all the profits at the end of every strawberry season. These are not stable organizations which can keep operating continuously. At this point, single family operators seem more stable than multi-family management. But it is still very difficult to judge which will become stronger and transform themselves into established enterprises. Research into change and transformation of farmer middlemen will be left as a theme for future study.

Note:

1. It is called 'Household-based Family Contract Responsibility System' according to DENG Xiaoping's reform and open-door Policy in the agricultural field. By changing the way Chinese farmers live, DENG recast China, and in many ways altered the world Chinese live in. He did this through the simple expedient of giving the land MAO Zedong had originally confiscated from the landlord class back to the farmers. Under this system, farmers became free to grow any crops they wish gradually, so long as they deliver a specified amount of staple crops to the government.
2. WANG (2001).

3. OSHIMA (2002).
4. There are many terms for fruit and vegetable middlemen, such as: Local purchaser, “Guohang”, “Guoshang”, Cooperative Association in transportation and selling of agricultural produce, and so on. But none of them is suitable for this paper’s analysis object. So the authors use ‘farmer middlemen’ in this paper.
5. HUANG, LIU (2005).
6. Mu is a unit of land in China. 1Mu=1/15Ha.
7. The formation of the strawberry producing area in XT village can be divided into 4 periods, which are Groping period (1983~1991), Growing period (1992~1996), Stabilizing period (1997~1999), and Adjusting period (2000~). Accompanied with the development of this area, strawberry farmers have been differentiated into three groups; <2mu, 2~3mu, and >3mu respectively. Farmer middlemen have come from the group with 2~3mu of strawberries. Some of them became full-time strawberry middlemen (WAN, ABE, etc (2006)).
8. In the beginning of the 1990s, more and more carriers appeared associated with the development of strawberry production. Among them, a private company set up in 2003, which owns 11 trucks, and concentrates on strawberry distribution to consuming cities during the harvesting season.
9. AN (1998) p.324: Shipping middlemen who are rich in labour resources and capital always take advantage of price differences in wholesale markets.
10. OSHIMA (2002) p.67.

References:

1. WANG Zhigang: The Reorganization of the Structure for Fruit and Vegetable Wholesale Markets in China.
Kyushu University Press (Japan), March 2001.
2. OSHIMA Kazutsugu: The Function of the Fruit and Vegetable Middlemen in Apple distribution in Liquan County, Shanxi Province, China. Journal of

Rural Community Studies (Japan), No.94, March 2002, pp.61 ~ 70.

3. HUANG Zuhui and LIU Dongying: China's Logistics System for Agricultural Products: Their Development and Institutional Aspects. Issues in Agricultural Economy (China), No.4/2005(Vol.26, Serial No.304), pp.49 ~53.
4. WAN Guowei, ABE Jun, ZHENG Qing and Mohammad Munsur Rahman: Prospects of China's Developing Strawberry Producing Areas under Market Economy: A Case Study in a Village of Hangzhou City, China. Agricultural Marketing Journal of Japan. Vol.15, No.1 (Serial No.63), June 2006, pp.61~65.
5. AN Yufa: The Character and Function of Middlemen in Vegetable Producing Area in China. Journal of Rural Economics(Special Issue 1998), the Agricultural Economics Society of Japan, pp.320 ~ 325.
6. KOBAYASHI Kohei, KAI Stoshi *et al.*: The Transforming of Agricultural Produce Marketing Systems: International Comparison of wholesale Markets for Fruit and Vegetables. Rural Culture Association (Japan), Nov. 1995.
7. SHI Junmin, AN Yufa, ZHOU Yinghuan and CHEN Yongfu: The Agricultural Policies of Modern China, Ie-no-hikari Association, June 2005.