STRUCTURAL ADJUSTMENT OF KOREAN AGRICULTURE : GOVERNMENT POLICY PROGRAMS AND ENCOUNTERING PROBLEMS

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I. Introduction

The majority of Korean farmers are still partially commercialized. They are characterized by having dual standard in goal seeking. That is, they wish to obtain sustenance and increase their cash income, and at the same time, possess a limited capacity to make adjustments in the use of their productive resources in response to changes in markets.

Korean agriculture is characterized by a small-scale family farm system. The average farm size was about 1.23 hectares in 1991. More than 60 percent of farms are less than 1.0 hectares in size.

At this moment, many Korean famers find themselves that they are standing at a cross-road in respect of their future directions : to be a small-scale family farm but with no guarantee of future livelihood ; to be a large-scale family farm ; and to become a non-farmer but have no guarantee of non-farm job. In other words, Korean family farms are in jeopardy as a result of the process of rapid urbanization and agricultural trade liberalization.

Among the many structural issues in the agricultural development, the followings are considered as urgent issues : enlargement of farm size through lands consolidation and farm mechanization ; increasing the farmer's accessibility to land resource : manpower development for young future farmers ; minimization of Government intervention in the agricultural sector ; and narrowing urban-rural disparities of income and economic opportunities. To change the agricultural structure, the Korean Government has under

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taken a series of policy programs since the late 1980s. However, the agricultural structure has not been not changed significantly because of the many obstacles to be tackled.

The objective of this paper is to overview the historical changes of the agricultural structure, and to identify the current issues in the process of structural adjustment in Korea. The Government's policy programs being implemented for structural change are summarized. And finally, the barriers to structural change and policy directions are discussed.

II. An Overview of Changes in the Korean Agricultural Structure

The Structural issues in agriculture usually include size of the farm, number of farms, goals of farming, tenure patterns, legal status of farms, and market arrangements under which farmers buy and sell their inputs and outputs.[1] This chapter overviews the Korean agricultural structure.

1. Farm Size and Number of Farms

There are about 1.67million farm households cultivating 2.09 million hectares of agricultural land in 1991, meaning that the average farm size is about 1.25 hectare. More than 60 percent of the total farms operate less than 1 hectare of farm land as shown on <Table 1>.

It also shows that the number of farm households in each class of farm size are decreasing, except farm households with more than 2.0 hectares. This implies that the average farm size is increasing steadily, but the majority of the farmers are still operating small-scale farms.

Theoretically, farm size can be identified by various measurements. However, it is not erroneous to determine the size of a farm by its cultivating area because most farmers produce crops, and income from crop production accounts for more than 70 percent of total farm income in Korea. Almost all of Korean farms are classified as family

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[1] Many people argue that agricultural techonolgy should be included in the structrual issues. However, it is excluded in this paper because it is a factor that changes the agricultural structure.

TABLE 1. Number of Farm Households by Land Size, Selected Years

(In 1,000 households)

Year	below 0.5 ha	0.5-1.0 ha	1.0-2.0 ha	Above 2.0ha	Total[1)]
1970	787(32.6)	824(34.2)	639(26.5)	161(6.7)	2,411(100.0)
1975	691(30.2)	828(36.2)	618(27.0)	148(6.5)	2,285(100.0)
1980	612(28.8)	748(35.2)	629(29.6)	139(6.5)	2,128(100.0)
1985	534(28.4)	686(36.5)	550(29.3)	110(5.8)	1,880(100.0)
1991	466(30.2)	527(31.6)	511(30.7)	163(9.8)	1,667(100.0)

Source : Ministry of Agricultures, Forestry and Fisheries (MAFF), 1992.
Note 1) Non-crop farm households are excluded.

farms, because they are operated by the farm household's family members. In Korea, the family farm is broadly defined as a farm which is operated by a farm household, meaning that both of the farm operator, and the laborers, are the family members.

The concept of family farm was firstly adopted by the Korean Government in the process of enacting the Farmland Reform Law in the 1948-50 period. The fundamental structure of Korean agriculture, the owner-operated family farm system, was established during this period. In the Farmland Reform Law, the maximum farmland holding by a farm household was limited to 3.0 ha. of crop land. The three hectare landholding limit was designed to maximum farmland area operated by a farm family. Actually, it was quite impossible to manage more than three hectares of farmland by a farm family in the 1950s, due to the low level of farm mechanization. Most farming practices were conducted by the use of human labor and animal power.

As a result of Farmland Reform Law, the present structure of Korean agriculture is characterized by many independent family farms with small land holdings.

In respect of labor use, more than 79 percent of total farm labor is family labor. It differs for each farm size, however, the range is not large. For example, the percentage of family labor in total farm labor is about 85 percent in the less than 0.5ha. land holding class, whereas it is about 74 percent in the more than 2.0ha. land holding class.

Following professor Nakajima's classification of family farms

(Nakajima, 1970), the present Korean family farms are said to be commercialized family farms. As shown on <Table 2>, the average commercialization rate of farm production in 1991 was 80.0 percent while it was 81.1 percent in the middle size farm, and 79.8 percent in the large size farm.

Off-farm works are common among many family farms. For a long time, it had been important to the small size farm households to enhance their family income because they do not have enough farm resources except family labor. A commonly used index, which measures the degree of being an off-farm household, is calculated either by the propotion of total family labor utilized off the farm, or by the proportion of non-farm income in the total farm family income. In many Korean Government statistics, the terms, part-time or full-time farm households, are commonly used instead of the other terms, off-or on-farm work households. A farm is defined as a part-time farm if it has more than 30 days of off-farm work by the family members.

TABLE 2. Commerialization Rates of Farm Products by Farm size in 1991.

(Unit: %)

Farm size	Less than 0.5ha	0.5~ 1.0	1.0~ 1.5	1.5~ 2.0	More than 2.0ha	Average
Commercialization Rate[1)]	80.0	77.7	81.1	81.2	79.8	80.0

Source: This data were recalculated from MAFF, The Farm Household Survey Results, 1990.

Note: 1) The commercialization rate is calculated based on the farm household's cash receipts from farming, divided by the total agricultral gross receipts.

The proportion of part-time farm households has been increasing since 1975. More specifically, the number of type II part-time farm households (farm income < off-farm income) has increased, while the numbers of full time and type I farm household (farm income> off-farm income) has decreased. The proportions of full-time, type I and type II part-time households in total farm households were 80.6 per cent, 12.5 percent, and 6.9 percent, respectively in 1975. In 1991, they were 65.7 percent, 14.9 percent, and 19.3 percent,

respectively. This may be interpreted in such a way that off-farm work seems inevitable in order to solve the low level of farm household's income in a society where small size family farms are dominant, like Korea.

Despite the off-work contributions to increasing the farm household's income, it has some undesirable implications for national agricultural development. Like many other countries, land productivity of the part-time farm is usually lower than that of the full-time farm in Korea (Suh, 1985).

TABLE 3. Changes in the Number of Farm Household Classified by the Degree of Off-Farm Income

Year	Total	Full-time	Part - time[1]		
			Sub-total	Type I	Type II
1970	2,483(100.0)	1,681(67.7)	802(32.3)	488(19.7)	314(12.6)
1975	2,379(100.0)	1,917(80.6)	462(19.4)	298(12.5)	164(6.9)
1980	2,155(100.0)	1,642(76.2)	513(23.8)	295(13.7)	218(10.1)
1985	1,926(100.0)	1,518(78.8)	408(21.2)	168(8.7)	240(12.5)
1991	1,702(100.0)	1,119(65.7)	583(34,3)	254(14.9)	329(19.3)

Source: MAFF, Major Agricultural Statistics in Korea, 1992.
Note: 1) A farm is classified as a part-time household if it has more than 30 days of off-farm works by the family members. A part-time farm is classified as a type I if its off-farm income is less than 50% of total farm household's income, and type II, if it has more than 50% of off-farm income in total farm household's income.

2. Specialization of Farming

Multi-production is another characteristic of Korean family farms. Even though the general level of farm commercialization has been increasing, a large number of farm households produce more than one agricultural product. In general, Korean farms are characterized by the ricebased multi-product family farms, because rice is a basic crop in most of their farming system.

With small landholdings and multi-products, the Korean family farms cannot be highly specialized in production. Due to this, it is very difficult to achieve efficiency of scale economies, and specialization

benefits.

As shown on <Table 4>, the number of the multi-product general farms has decreased rapidly since 1975. However, the proportion, as well as number of the highly specialized family farms has increased. The number of highly specialized family farms doubled during the 1975-1991 period. In particular, the number of livestock and greenhouse vegetable farms has notably increased.

In summary, almost all Korean farms are classified as family farms, and characterized by small land holdings with a moderate degree of commercialization. Moreover, the degree of specialization is not high compared to farms in many developed countries. In addition, the number of part-time family farms is about one-fourth of the total farms, and it is becoming important for the farm households with small land holdings to increase their family income. A high degree of specialization has been taking place in area of high income elastic agricultural products such as livestock and vegetable products since 1980.

TABLE 4. Number of Farm Household Classified by Degree of Specialzation, Selected Years

(unit : 1,000 F.H)

Year	Total F.H	General F.H [1]	Highly Specialized F. H [2]						
			Sub-Total	Crop	Beef	Dairy	Swine	Chicken	Green House
1975	2,379 (100.0)	2,339.1 (98.3)	39.9 (1.7)	36	0.3	2.5	-	0.2	0.9
1980	2,155 (100.0)	2,116.2 (98.2)	39.8 (1.8)	31	1.1	5.7	-	0.7	1.3
1985	1,962 (100.0)	1,916.2 (97.7)	45.8 (2.7)	23	5.0	12.8	0.2	1.9	2.9
1989	1,702 (100.0)	1,710.7 (96.5)	61.3 (3.5)	29	4.9	20.1	0.3	1.6	5.4

Source: MAFF, Major Agricultural Statistics in Korea, 1991.

Note: 1) A farm household with multi-products

2) A highly specialized farm household is defined as a farm house-hold which has a large size farm, and has its major income from one agricultural product. The size criteria for this category are as follows : for crop farming, more than 3.0ha. ; for beef, more than 20 heads : for dairy, more than 10 heads: for swine, more than 1,000 heads : chicken, more than 10,000 heads : and for greenhouse, more than 0.5ha.

3. Market Agrrangement for Agricultural Inputs and Outputs

During the last three decades, the Government has intervened in the inputs and outputs markets in the agricultural sector.

In case of agricultural inputs, chemicals and farm machineries have been provided to the farmers with subsidized by the Government. The main purposes of Government subsidies for inputs has been to encourage the use of more modern farm inputs at farm level. Also, primary agricultural cooperatives sell fertilizers and pesticides to the farmers at subsidized prices. Since the subsidized price is lower than the market price, the Government directly subsidizes the differences between the two prices to the primary agricultural cooperatives. For farm machineries, the Government provides special credit, an intermediate term loan with a low rate of interest, to the farmers.

Purchasing rice by the Government has been typical of Government intervention in the agricultural output market in Korea. The Korean Government has adopted a dual price system for rice since early 1970s. The Government buys rice from farmers at a higher price than the market price, and sells it to consumers at a lower price than the market price.

The main purposes of the dual price system for rice is to stabilize consumer prices, and to support farm household income through a guaranteed price system. In order to support farm household income, the Government has to increase the price of rice and the quantity of rice purchased from farmers. Recently, about 20 percent or more of the total production of rice has been purchased annually by the Government. The funds for purchasing rice are provided largely from the national bond market through the issue of a special grain bond by the Government. As the quantity of the Government's rice increases and/or the purchase price of rice increases, the total amount of funds for the operation of the Government's rice program increases drastically. Thus, the increasement of fund for the Government's rice program becomes a crucial factor in increasing the Government's budget deficits.

The private rice market has not developed significantly in Korea, because of Government intervention in the rice market during the last two decades. Because per capita consumption of rice has

declined since 1990, it is expected that the quantity of rice produced will exceed that of domestic consumption in the near future. Then, the role of Government in the rice market will be weakened, and shift to support farm prices with a minimum price level during the rice harvest season.

4. Trade Liberalization

Since 1989 Korea has continually taken steps to open its agricultural markets in line with the import liberalization schedule. As a result, the agricultural import liberalization ratio for 1991 has increased to 84.9 percent.

Agricultural trade liberalization is anticipated to accelerate, due to Korea's graduation from the GATT Article 18 :B(Balance of Payment Clause, BOP). From 1989 to 1997, the Korean Government cannot deny entrance to its domestic agricultural markets due to a trade deficit. Moreover, Korean agriculture should prepare for the trade liberalization which is to be being discussed and negotiated in the GATT/Urguay Round in Geneva, Switzerland.

Considering the fact that Korean agriculture has not been well prepared for trade liberalization, opening domestic agricultural markets to foreign countries will affect many Korean family farms. Although Korea has made substantial developments in the agricultural sector recently, it still faces many difficult problems, primarilly due to the small land holding size and the inequity found within the rural and urban sectors. Korean family farms do not have the adaptive ability to cope with the import liberalization of agricultural products. To make the matter worse, when the GATT/Urguay Round settles down, it will be hard for the Government to give subsidies for agricultural production.

With regard to international competitiveness,it is difficult for Korean agriculture to compete with foreign agriculture because it is in its infant stage of development. Except for a very few commodities, most agricultural products have prices more than 2 times higher than those in the world market.

As shown in <Table 5>, the prices of domestic food grains range from 3.8 to 6.0 times higher than those of the world market. In case of livestock products, beef is the weakest product. Vegetables

and fruit are relatively strong in the trade liberalization, however, prices for these products are almost 2 times higher than world market prices. Because of a weakness in price competitiveness Korean agriculture will be seriously damaged when import liberalization is realized.

TABLE 5. Prices of Major Agricultural Products in the Domestic and World Markets

(unit: Won/kg)

Items	Domestic Price[1] (A)	World Price[2] (B)	A/B	Items	Domestic Price (A)	Worl Price (B)	A/B
Rice	1,552	258	6.0	Patato	310	146	2.1
Barley	387	103	3.8	Onion	378	181	2.1
Corn	357	83	4.3	Garlic	1,818	697	2.6
Soybean	1,069	193	5.5	Red Pepper	4,91	923	5.3
Peanut	2,267	519	4.4	Orange	715	358	2.0
Beef	4,653	1,750	2.7	Grape	2,837	1,471	1.9
Pork	1,864	1,482	1.3	Apple	944	456	2.1
Chicken	1,489	1,053	1.4	Pear	881	359	2.5
Cheese	7,000	1,100	6.4	Peach	696	470	1.5

Source: MAFF, Competitiveness of Domestic Agricultural Products,1990
Note; 1) Average prices during the 1986-1988 period.
2) Quality differences of agricultural products were not considered in the domestic and world markets.

Agricultural import liberalization will affect Korean agriculture in many ways : decreases in domestic production; increases in unemployed domestic farm resources; and a decrease in farm household income. National agricultural production is expected to decrease 80 percent from current levels, with planted acreage and farm household numbers decreasing by 63 percent and 75 percent, respectively (Lee,1990).

Many farm operators may be unemployed with no job prospects when they give up farming, because the average age for more than 85 percent of them is greater than 40 years old.

Furthermore, the Government cannot subsidized farm income through price support and input subsidies after fthe GATT/UR negotiations. Substantial amounts of farm income are expected to the

reduced after the agricultural trade liberalization. Thus, the Government, as well as farmers, need to find ways to overcome this undesirable future situation.

III. Issues Relating to Structural Adjustment[1]

Korean farms face several difficulties at the moment : disparity of income between the agricultural and non-agricultural sectors, shortage of labor force and young future farmers, and trade liberalization. To overcome these problems, structural adjustment is necessary within a limited period.

1. Income Disparities between the Farm and Nonfarm Sectors

The farm household's income is not comparable with that of their counterparts in urban area. The goals of a family farm may not be as achievable as that of urban family that maximizes labor income. However, the objective of obtaining the level of returns for each of the farm inputs, including family labor and capital investments on farms, as in other sectors, should undoubtly be the primary goal of an economically viable family farm.

The average farm household income was about 84.5 percent of that of the urban household in 1991 <Table 5>. The disparity is larger if we compare the average income of family members. The average income per farm household's member isn was about 81.6 percent of that of an urban household's member in 1991.

As far as income disparity is concerned, there are no prospects for improving this gap between farm and urban households in near future. The growth rate of farm sector is not anticipated to surpass that of the non-farm sector. Also the major farm income sources are expected to disappear as trade liberalization continues. Moreover, the number of farm household's and the farm population is not expected

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[1] Although the issues of technology development and improvement of rural living conditions are included in the Government's policy programs, they are not included in this paper, because such issues are basically not issues directly relating to agricultural structure.

to decrease dramatically within several years due to the skewed age distribution of farm operators in Korea.

TABLE 6. Comparison of Incomes between Urban and Rural Households

(unit: 1,000 Won(current))

Year	Per HouseholdPer Household Membe					
	Urban Wage Earner (A) [1]	Farm Household (B)	B (%) A	Urban Wage Earner (C)	Farm Household (D)	D (%) C
1975	859	873	101.6	167	155	92.8
1980	3,205	2,693	84.0	700	536	76.6
1985	5,958	5,736	96.3	1,425	1,298	91.1
1991	16,219	13,105	80.8	2,807	2,291	81.6

Source: MAFF, Farm Households Economy Survey Results, 1975-1992
EPB, Urbarn Wage Earner's Households Survey Results, 1975-1991.
Note: 1) Inclucing Debts & Self Assessment

2. Shortage of Young Future Farmers

As shown in <Table 6>, the estimates show that about 85.4 percent of Korean farm operators are more than 40 years old,whereas in 1970, it was about 60 percent. Because of old age, most farm operators cannot be employed in the non-farm sector. Consequently, the aged farm operators may not easily migrate.

Furthermore, it is inrealistic to expect that the aged farm operators will adopt new farm technology, and invest more to improve their farm

TABLE 7. Age Distribution of Farm Operators

(unit: %)

Year	Age Distribution (years)					Total
	- 29	30 - 39	40 - 49	50 - 59	60 -	
1970	9.9	30.2	30.4	20.9	8.5	100.0
1980	6.0	17.0	30.8	25.8	20.3	100.0
1985	4.4	14.4	26.6	30.2	24.4	100.0
1990	2.1	12.5	21.1	33.0	31.3	100.0

Source: MAFF, The Results of Agricultural Census, 1972-1992.

operations. Thus, a dramatic increase of farm income by them cannot be expected in the near future.

3. Land Tenure System

Throughout the history of the land ownership system, there has been nothing but problems found within the agricultural sector. Although the Government created the owner-operating farm system in 1950, the system collapsed, and created another social problem. Conflict has existed all the time between farmers (owner-farmers) and non-farmers (landlords).

Presently, the terms of access to farmland's becoming serious for the family farm. The share of tenancy lands has been increasing since 1970. More than 31 percent of Korean farm land was under tenancy in 1987. It was 26.8 percent in 1983 <Table 7>. A more serious phenomenon is the increase in the share of tenant lands owned by non- farmers. It was about 20.7 percent of total farmland in 1987. It is due to that reason that land prices in the non-farm sector as well as the farm sector have been increasing, and many urban dwellers have been purchasing farmland for speculation.

Because of the high farmland price, small size farms find it difficult to purchase farmlands for enlarging their farm size. In

TABLE 8. Classification of Farmlands by Ownership

(unit: 1,000 ha,%)

Year	Total Farm Land	Owner of Tenant Land				
		Sub-Total	Government	Famer	Non - Farmer	
					Inherited to	Purchased by
1983	2,167	581	16	215	224	126
	(100.0)	(26.8)	(0.7)	(9.9)	(10.3)	(5.8)
1985	2,144	654	15	226	272	141
	(100.0)	(30.5)	(0.7)	(10.5)	(12.7)	(6.6)
1987	2,143	666	17	205	356	88
	(100.0)	(31.1)	(0.8)	(9.6)	(16.6)	(4.1)

Source: Kim Sung-Ho, "Study on Farmland Reform History of Korea", PP. 1109, KREI, 1989.

addition, many farmers are not interested in using farmland for farming purposes because most Korean farmers have gloomy perspectives of their future if they continue to operate a farm. They expect that agricultural trade liberalization will wipe out Korean agriculture, and that there will not be many competitive agricultural products after trade liberalization. Therefore, they attach great importance to the transaction value of farm lands rather than to the earnings from the farms. In fact, most farmers are apt to accept the land ownership system under which even non-farmers are allowed to own farm land. This leads to a conflict with social goals.

IV. Government Policy Programs and Encountering Problems

To encounter the present and the future difficulties facing Korean agriculture, the Government has adopted a comprehensive policy program aiming at improving the agricultural structure. The main objectives of this policy program are to make the Korean agricultural structure viable under trade liberalization, and to improve the level of living stardard of the farmers.

There are many sub-programs designed to change the agricultural structure ; 1) reducing the number of farm households in order to increase the average farm size ; 2) increasing the farmer's accessibility to land resources : 3) facilitating farm mechanization to cope with rural labor shortages ; 4) decreasing Government intervention in the agricultural inputs and outputs markets ; 5) selecting and training young future farmers to help them to be good farm operater, and 6) classifying and bringing up farms based on their development potential in order to induce them to become a specialized farm or a part-time farm.

Sub-programs for improving farmer's living standards are as follows; 1) increasing off-farm income through rural industrialization, and 2) providing high quality social services in the fields of education, health, housing and social security.

A total amount of 42 trillion Won will be invested for agriculture by the Government during the 1992-1998 period. Institutions, regulations and Government policy measures are planned in order to foster the improvement of the agricultural structure. For

example, the principle of owner cultivation in land use, and a ceiling of 3 hectares of landholding will change. Tenancy is allowed, and the maximum area of land holding by a farm household will be extended from 3 hectares to 20 hectares. A direct payment system is being considered for marginal farm households after trade liberalization. Moreover, Government agricultural loans and direct subsidies are going to concentrate on the farms which will become large-scale commercial farms. In other words, a discriminative policy will be applied to farmers based on their resource endownments and management.

In principle, the Government's policy direction is appropriate for restructuring Korean agriculture. Nevertheless, it has many problems to be solved in the process of it's implementation.

First of all it should be considered how to supply a large amount of domestic capital within 5 years, meaning that about 8 trillion Wons should be provided either by the Government or by the private sector. In fact, to provide domestic capital by the Government, the amount of the annual Government budget should be doubled. A special tax for the purpose of providing funds for restructuring the agricultural sector will be considered. If this measure is rejected, the Ministry of Agriculture, Forestry and Fisheries should cut the budget for policy programs which have less priority. One possible area would be the reduction of Government deficits originating from the dual price system for rice. However, it is not easy to cut Government budgets for Government rice purchasing, because there is no alternative for farmers to increase their income in the short term. Reduction of Government budget for rice purchases means lowering the farmer's income in Korea.

Secondly, the time period, during which the Korean agricultural structure is to be improved is too short. It is widely accepted that structural adjustment takes a long time, maybe at least one-generation in the agricultural sector. Presently, about 64.3 percent of farm operators are more than 50 years old, and almost all of them have no successors to continue farming. They are expected to retire within the next 20 years. Therefore, at least 20 years is required in order to reduce by about 60 or 65 percent, total farm households in Korea. In other words, the success or failure of structural adjustment of the Korean family farm system will depend on the length of this period.

Thirdly, there is no guarantee that Korean agriculture can compete with foreign agriculture after structural adjustment and trade liberalization. As mentioned earlier, there are not many agricultural products that can compete with foreign agricultural products. Agricultural products such as poultry, swine, vegetables, fruit and flowers may be able to compete with their counterpart foreign agricultural products after a successful structural adjustment. However, the rice and cattle industries, the most important income sources for the majority of Korean farms, are not expected to reduce their production costs to well below or equivalent to world market prices after structural adjustment.

Fourthly, it is not easy for farmers to enlarge their farm size. The rapid decline of the farm population will be provided an opportunity to enlarge the size of the cultivated land of family farms. To facilitate this the Government has increased the special fund for purchasing farm land. However, demand for increasing farm size is not large because of the uncertain future of the agricultural economy in Korea. It is especially true in case of investment in purchasing farmland. Because the price of farm land has increased more rapidly than the productivity of farmland, the economic feasibility of scale expansion of family farms by purchasing land is decreasing despite the rapid decline of the farm population.

Furthermore, to achieve a large scale family farm system, it is necessary to establish an inheritance system for farm land. By restricting the ownership of farmland to the farmers, and encouraging the potential future farmers or full-time farmers to hold farm land, the foundation of a large-scale, full-time farming system can be established.

Fifthly, insufficient development of physical infrastructure in the agricultural sector is another obstacle of the promotion of farm mechanization and large-scale farming. About 65 percent of total farmland in Korea is not developed, and the farm roads and irrigation system are not suitable for mechanization. These improvements, together with favorable changes in machinery prices, will facilitate the adoption of farm mechanization by providing farmers with some financial incentives. Also, consolidation of farmland is important because the current fragmentation is serious, and it retards large-scale mechanized farming and efficient land use.

Finally, there is no clear direction for the aged or future retirement

farmers who are now more than 50 years old, and account for about 70 percent of total farmers in Korea. In pursuing structural adjustment, it is important to induce the aged farmers to give up farming and transfer their farmland to those farmers who can enlarge their farm size. The establishment of a pension system for those who are not eligible for farming will enable them to give up farming and transfer their land to eligible young farmers. Furthermore, living conditions in rural area should be improved mainly through direct Government subsidies. Improvements in farm houses, medical and educational services, and other social infrastructure are urgently needed to encourage young Korean farmers to settle down in rural areas. Without them, the continuation of Korean agriculture will not be guaranteed in the future.

V. Summary and Conclusion

Korean agriculture is in jeopardy as a consequence of the process of rapid industrialization and agricultural trade liberalization. As many people point out the majority of Korean farms are not been prepared for the trade liberalization. It is will be difficult for them, unless they change their farm structure.

Korean agriculture is characterized by a small-scale family farm system. The average farm size was about 1.2 hectares in 1991. Most farmers are still partially commercialized, and don't have the capacity to invest more in their farms. To change the present Korean agricultural structure, the Government has undertaken a series of policy measures programs since the late 1980s. However, it doesn't seem likely that change will be achieved within a short period, in spite of the fact that a total amount of 42 trillion Wons is planned to be invested by the Government within the next 10 years.

The followings factors are expected to be obstacles in pursuing a policy for agricultural structural adjustment : (1) the budget sources for providing 42 trillion Won during 10 years are not secured : (2) 10 years is not enough time to change the agricultural structure ; (3) it is unclear how the competitive Korean agriculture will be after structural adjustment ; (4) difficulties are expected to arise in achieving enlargement of farm size due to high land prices, and the uncertain future of agriculture felt by farmers, and land fragmentation

; (5) insufficient development of physical infrastructure in the agricultural sector, and (6) the unclear policy direction for the aged farmers who dominate the farming sector at this time.

In order to solve the above mentioned problems, the Government must prepare a theroughful and detailed policy program.

In particular, some policy programs and measures should be devised for those who are under the present policy programs. In this context a Government subsidized pension system should be implemented as early as possible for aged farmers. Also, the joint operation or the joint farming program should be encouraged more than so before. In order to do this, the Government should give more emphasis to contract farming, farm mechanization groups, and cooperative marketing enterprises. Through these activities, many small-scale family farms can reduce their farming costs without enlarging each farm enterprise.

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