

KOREAN AGRICULTURE AND AGRICULTURAL POLICY AFTER THE ESTABLISHMENT OF WORLD TRADE ORGANIZATION

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I. Introduction

Korean agricultural policy is facing a substantial adjustment problem. The new government is under-going the severe economic difficulties related with the reform initiated by the International Monetary Fund(IMF) after the bailout loan last year. In 1993, with the conclusion of the Uruguay Round of GATT negotiations, Korean agriculture has gone through a turmoil. The government has been pursuing a reform process for the last four years in agriculture. The new government, however, is seeking ways to further adjust the agricultural policy with a view to response to the economic hardship.

This paper aims to review the agricultural policy issues after the Uruguay Round agricultural negotiations. After a brief sketch of Korean agriculture, this section summarizes the policy issues along with the process of policy formulation. The agricultural policy objectives and measures are addressed in the second section. Agricultural policy by agricultural sectors-rice, livestock, horticulture-and production elements and functions will be reviewed in the following sections. The review on agricultural investment will be followed by concluding comments. Last section evaluates the policy reform and sums up the remaining and new policy issues.

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1. The Outline of Korean Agriculture

Throughout the remarkable economic development in the last four decades, the share of agriculture in the economy has continuously declined. It has been the result of the growth-rate gap between the manufacturing and construction sectors and agriculture. Despite the declining share, agriculture in Korea has much importance for the national food security and environmental conservation. Also, the rural community is regarded as the hometown where most Korean people's heart is and where they were raised and still have farming relatives. This fact sometimes mobilizes political power in the policy-making. The extensive government intervention in agriculture in the previous periods reflects this caring interests of the out-migrants from rural areas.

Korea's history of agrarian culture, dominated by rice cultivation, goes back thousands of years. Because of the high population/land ratio, its agriculture is featured by small, owner-operated farms. The average farm size is about 1.3 hectare in 1997. Rice is the major crop,

TABLE 1 Agriculture in the National Economy

	units	1970	1980	1990	1996
1. population:					
- total	thousands	32,241	38,124	42,869	45,545
- agriculture	thousands	14,422	10,827	6,661	4,692
- % of total	%	44.7	28.4	15.5	10.3
2. Employment:					
- total	thousands	9,167	13,683	18,085	20,764
- agriculture	thousands	4,756	4,429	3,100	2,298
- % of total	%	49.5	32.3	17.1	11.1
3. GDP:					
- total	billion	2,771	38,148	179,539	389,979
- agriculture	billion	645	4,844	13,285	21,094
- % of total	%	23.3	12.7	7.4	5.4

Source: MAF, Major Statistics of Agriculture and Forestry, 1997.

accounting for about 25 percent of the total farm value produced in the same year. Nevertheless, rising income has increased the market demand for livestock products, vegetables and fruits. Changes in demand-mix and tastes have resulted in a changing share of agricultural products towards livestock and horticulture.

The number of farm households decreased from 2.5 million in 1970 to 2.2 million in 1980, and to 1.5 million in 1996. Among the 1.5 million farms, 60 percent are full-time farmers. Farm population in 1996 is 4.7 million or 10.3 percent of the total population. With the decreasing farm population, the composition of labor force, crop intensity, farm wage rate, the mechanization rate and other input factors are changing dramatically.

Of the 9.9 million hectares of the total land area, 20 percent or 1.9 million hectares are cultivated, and 1.2 million hectares are paddy fields for rice production and the remaining are uplands. Land under one owner is usually scattered in several small parcels. The 1996 Farm Household Economy Survey showed that the average farm income is about 23.3 million won. Rice is the most important income source while, as it is mentioned, the revenues from horticulture and livestock farming is rising considerably.

2. Policy Issues after the Conclusion of the Uruguay Round Negotiations

The Uruguay Round Agreement on Agriculture removed all quantitative import restrictions for agricultural products except for rice. Since Korea was allowed the developing country provisions, Korea has committed to reduce the average tariff rate by 24 percent and the domestic agricultural support by 13.3 percent over the ten-year implementation period, 1995 to 2004. On the other hand, the green-box measures such as general services by the government and the direct payments to producers including decoupled income support, structural adjustment assistance provided through investment aids have been exempted from the reduction commitments. Measures for developing countries such as investment subsidies have also been exempted from the reduction commitments.

The commitment has raised serious questions regarding the policy of Korean agriculture. First of all, the enhancement of

agricultural competitiveness emerged as one of the most urgent policy issues. With the novel situation of overall market liberalization, the competitiveness of domestic agricultural products in the domestic as well as international market was questioned. Previously, farm income had been supported through the price policy and border protection measures. Agricultural competitiveness, especially the price competitiveness, was weak because of the low labor productivity and high costs of land. Low productivity was caused by the low investment in the agricultural sector in turn. The priority of investment has been laid on industrial sectors with more linkage effects during the whole industrialization period. The investment projects on the agricultural production and marketing facilities needed to be completed urgently.

Second, with the reduction of government support level, the enhancement of efficiency in agricultural policies appeared as a vital policy issue. The launch of local autonomy system in 1995 added to the necessity for a more efficient agricultural policy.

Third, the policies related to the improvement of rural living environment comprised another important policy issue. The opening of rice market in spite of the government's promise to keep it closed during the presidential election campaign has provoked emotional frustration and street demonstrations. In order to revitalize the morale of farmers, the government was strongly requested to invest on rural social infrastructure.

3. The Formation and Implementation of Agricultural Policy

In 1994, the government issued a new agricultural policy package, namely the "Agriculture and Fisheries Development Plan(AFDP) and the Agricultural Policy Reform." Increasing concerns from the rural residents about the future of their lives have made the government establish the new policy, focusing on the enhancement of competitiveness combined with the welfare-oriented programs.

The AFDP was the result of a lengthy and elaborate discussion process between the civilian experts and the government officials. As the first step to minimize social instability incurred by the conclusion of the Uruguay Round negotiations, the position of senior secretary for agriculture and fisheries affairs was newly installed at the presidential residence. It was a symbolic decision towards the

agricultural policy-making at the very top administrative level.

The President summoned to convene the Presidential Commission on Rural Reconstruction(PCRR). Thirty members representing agricultural cooperatives, academics, industry, and consumers were nominated by the President to work out a proposal to revive the agricultural and rural sectors. The PCRR was composed of three sub-committees: the Sub-committee for Agriculture and Fisheries Competitiveness, the Sub-committee for Rural Industry, and the Sub-committee for Farmers' and Fishers' Welfare.

After four months of active debate, on May 24, 1994, the PCRR submitted the final report, "Issues and Directions of Agricultural Policy Reform" to the President. The report was reviewed by the Commission for Agricultural Policy(CAP) chaired by the Prime Minister. The CAP moved swiftly to finalize the new agricultural plan. On June 14, 1994, the new policy package, AFDP, was officially adopted at a meeting chaired by the President.

There are a few features that distinguished the policy-making process from the former programs. First, a range of civilian experts and opinion leaders, including leaders of the farm movement, participated in the policy making as committee members. Second, in the government, ministries other than the Ministry of Agriculture, Forestry and Fisheries participated in making the plan. For instance, the Ministry of Interior took responsibility in the improvement of rural roads and housing. Third, the AFDP was backed by an unprecedented scale of government budget outlays. Especially, the Specific Tax for Agricultural and Rural Development and the investments and loans under the Agriculture and Fisheries Restructuring Plan have been the major sources of financial programs for the rural areas.

II. The Outline of Agricultural Policy

1. The Policy Objectives

With the conclusion of the Uruguay Round(UR) negotiations and the establishment of the World Trade Organization(WTO), the Korean agricultural policy faced a challenging situation. The new policy environment, which was seriously influenced by the international

movements, forced the Korean government to design policy with a view to forming a productive base in agriculture during the UR implementation period, i.e., 1995 to 2004. Other traditional policy goals, such as achieving the comparable income between urban and rural residents and self-sufficiency in rice, were pursued at the same time.

Pursuing the objectives described above, the AFDP focuses on the three policy objectives: one is to strengthen the competitiveness of agriculture as an industry and the other is to develop the rural communities as integrated bases for both agricultural and non-agricultural activities. The third objective aims to build comfortable rural areas with clean environment and good quality of life.

The government emphasized the non-agricultural bases of income in the rural areas in order to supplement the income from the small-scale farming sources. It assisted the farmers to narrow the gap between the farm and non-farm incomes. Korean farm households depend on more income from agricultural sources compared to Japan and Taiwan. For example, the ratio of non-farm income to farm households were 79.1 percent for Japan in 1995 and 64.8 percent for Taiwan in 1990, while for Korea, the non-agricultural income was 7.5 million won or 32.1 percent of the total farm income in 1996. Major non-farm income sources include off-farm jobs, non-farm businesses, pensions, interests and dividends, and the remittance from family members migrated to the urban regions. Farm households frequently supplement their income through non-agricultural employment during off seasons.

With the AFDP, the emphasis of the non-farm sources of farm income seems to have been weakened. Instead, more attention has been paid to increase in farm income of full-time farmers.

2. Major Policy Issues and Measures

In the agricultural competitiveness policy, the following ten major issues identified as being the most vital: 1) The nurturing of 150 thousand full-time specialized family-farms, 2) The assistance of the small- to medium-scale farms and the promotion of rural industry and service sectors, 3) The legal permission of incorporated farms, 4) The reform of farmland system, 5) The promotion of vertical integration

of production, processing and the marketing of agricultural products within a farm, 6) The improvement of agricultural infrastructure for production through mechanization, 7) The promotion of technically sound and low-input sustainable agriculture, 8) The improvement of quality control and the promotion of agricultural exports, 9) The promotion of environment-friendly livestock herding, and 10) The promotion of economic management of forestry and fisheries.

Policies targeted to improve the living environment of rural areas and welfare of farmers were implemented basically through the betterment of medical and educational services in the rural areas. In addition, in order to assist the retired farmers, the farmers' pension system was introduced with government subsidy.

Policy measures to achieve the competitiveness issues could be categorized as price and trade policies, direct payments, input subsidies, and the general government services. Price and trade measures include price stabilization and import controls. Rice is the most important item in the price and trade policies. Direct payments are paid to the livestock farmers to promote the high-quality products. There are also direct payments for the farmers who suffer disasters and who are retiring by selling or renting their land to full-time farmers. Farmers over 65 are qualified when they sell or rent their land. The payment rate is 258 won(US\$0.18) per square meter. The maximum payment per farmer is 15 million won.

Small-scale farmers get grants for school children. There are input subsidies for farmers in the forms of low interests, subsidized farm machine prices, and the subsidies for buildings and equipments, especially for the livestock farmers. General services of the government are rendered in the areas of research, extension, education, and the inspection services. In addition, the infrastructure for agricultural production such as the irrigation and drainage facilities and farmland consolidation are given the major benefits of general services.

3. A Historical Review of the Agricultural Policy Reform

Before the AFDP, there have been a number of policy guidelines to improve the agricultural structure. With the changes in policy environments, and, in particular, in order to ease the adjustment

processes, the government has responded to domestic and international pressures for the agricultural policy reform. A new agricultural policy was initiated in 1991, focusing on a more market-orientated policy. Growing concerns from both the agricultural sector and other sectors about the future of Korean agriculture forced the government to change its basic policy directions for agriculture from a price and income support-oriented policy to a market-oriented, competitive and efficient policy.

In the late 1991, the government announced the 42 trillion won, the ten-year Agriculture and Fisheries Restructuring Plan to improve the efficiency in agriculture and the rural living conditions¹. The underlying basis for the plan lies in the belief that a significant structural adjustment is necessary to prepare for the changing agricultural environments. The basic purposes of the plan are to improve the agricultural productivity and to enhance the competitiveness in the agricultural sector. The plan gives major priority to the land reform programs, that were believed to be the center-piece. The major contents of the plan are to transform the current system of the absolute and relative land system into the agricultural promotion zones, to make investment easier, and to grant tax exemptions. Under this plan, about 1.1 million hectares are expected to be designated as the Agricultural Promotion Zones. The farm size limitation of 3 hectares, including regulations on land use, was relaxed under the new scheme.

The Kim Young Sam government took office in February 1993, emphasizing the New Economic Policy(NEP) for the revitalization of the national economy. The New Agricultural Plan(NAP) was announced on June 24, 1993, as a subsidiary plan of the NEP. The government aimed to create a more efficient and competitive agricultural sector through the implementation of the NAP. The primary goals of the NAP are to make the agricultural sector more competitive, to nurture farmers' expertise to help them adjust to liberalization, and to improve rural living conditions.

In order to achieve these goals, the government had focused on

¹ This amount is exaggerated since the net investment by the central government is about 35 trillion won. Furthermore, it did not accomplished its target because of the economic crisis in 1998.

the following programs: farm mechanization, promotion of the high-value crops, maintaining farm population, and promoting the exports of processed agricultural products. The issue of land use has been given high priority under the plan. Attention was also given to the programs intended to restructure the institutional reforms in the agricultural sector. As outlined in the previous section, the government has set up the Agricultural and Fisheries Development Plan in 1994 to achieve the integrated development more effectively. It draws upon the former agricultural programs, while focusing on the enhancement of the agricultural competitiveness. In addition to putting much emphasis on policies strengthening the competitiveness of the farming sectors to compete in the world markets, fostering young full-time farmers in the crop, fruit and livestock sectors, the acceleration of mechanization, and the promotion of agricultural exports were emphasized. The government also implemented several rural welfare policies to make rural areas more attractive places to live.

III. Commodity Policies

1. Rice

Rice has been a part and parcel of the Korean culture, tradition, and sentiment. Rice-centric paddy farming has been the core of Korean agriculture. As a result, rice has been an integral part of the agricultural policy. For the most of Korean history, ensuring a sufficient supply of rice has been vital for social and political stability. The decrease in rice production since the late 1980's was mainly due to the drop in cultivation area since rice showed relatively low profitability per acre compared to fruits and vegetables. Thus, farmers in recent years have the tendency to convert land use to the commodities with higher profits. Moreover, the conversion of paddy land into factories and other industrial areas were observed in recent years. During 1996 and 1997, the Ministry of Agriculture and Forestry(MAF) has placed priority in its policy at securing land area for rice cultivation. For example, the Comprehensive Programme for Rice Industry Promotion in 1996 indicated the expansion of rice production basis as its policy objective.

Rice policy reform in 1993 aims to expand the role of the private sector in rice marketing. A certain level of seasonal variation in the rice price is allowed, and the variation would provide incentives for private sectors to participate in rice marketing with storage demand. Before the policy reform, the government operated a dual pricing system. The system set the prices and volumes for rice purchased from producers by taking account of inflation trends, government budgets and other national economic objectives. Until recently, reselling was carried out at a lower price. Following the change in the policy, the rice purchased from the producers is now sold through a competitive bidding system by the National Agricultural Cooperatives Federation(NACF) at a price close to the market price.

Around 30 percent of the total rice production has been purchased by the government in recent years, and the rest is consumed by farmers or is marketed through the private channels. A buffer-stock arrangement has been in place, intended to facilitate the price stability and an orderly marketing of rice. The quantity purchased is basically constrained by the commitment of reduction of domestic supports. Every year, the government decides on the quantity and price of rice to be purchased after the consultation with the Grain Marketing Committee(GMC), established in 1989, composed of the members appointed by the MAF.

2. Livestock

Cattle raising is a major source of farm income in Korea. Until the 1960s, animal labor was important in farming operations. In the 1970s, the importance of animal labor declined sharply with farm mechanization.

Meat production has increased continuously over the last three decades largely in response to the increased consumption and government support. The total meat production in 1996 was 1,150 thousand MT up from 773 thousand MT in 1990 and 423 thousand MT in 1980. While the total beef production in 1996 was around 174 thousand MT, compared to 95 thousand MT in 1990, it showed a relatively stable trend in recent years. Although meat production has increased substantially over the past decade, the domestic production

could not meet the rapidly increasing meat demands, especially for beef. The beef self-sufficiency rate was 53.9 percent in 1996.

Pork has become increasingly important in the Korean diet because of its relatively low price compared to beef. The pork production increased sharply from 235 thousand MT in 1980 to 692 thousand MT in 1996. Chicken production also increased significantly from 90 thousand MT in 1980 to 284 thousand MT in 1996. The broiler industry is rapidly increasing due to the income and population growth, and the expanding processed food industry. In addition, the introduction of fast-food chicken franchises has resulted in a rapid expansion in poultry production and consumption.

Conditions in the Korean meat sector since 1995 imply further import growth, especially due to the UR agreements. Quantitative restrictions on the import of beef are scheduled to be completely removed in 2001. Also, the profitability in meat production is declining further as consumers demanded cheaper imported meat. In recent years, the rate of increase in the production costs has exceeded the rate of increase in the farm gate prices. This has constrained further expansion of the industry.

The growth of dairy industry has been slow even if milk consumption has been increasing rapidly as a result of higher incomes. Milk production in 1996 was 2,034 thousand MT increasing from 1,741 thousand MT in 1990². In 1996, milk imports amounted to 474 thousand MT, leaving the self-sufficiency rate at 79 percent. The Korean livestock industries are facing serious challenges domestically as well as internationally. Livestock farming became unpopular because of the strenuous labor and strict environmental requirements.

The livestock policies have turned towards the improvement of competitiveness. In addition, preserving stabilized bases for the domestic supply continue to be an important policy objective. Major policies for the livestock sector in accord with the WTO rules can be summarized as follows: 1) A continuous policy to lower production costs including the expansion of herding scale, automatization, and mechanization; 2) the computerized cattle registration system for an effective management of market and disease control, genetic improvement, slaughter, moving and milk production; 3) the

² All numbers are in the fluid milk equivalence.

production and marketing of higher quality and more sanitary livestock products including the cut-meat and branded-meat; 4) the expansion of grading system of beef and pork to improve the quality, and the assistance for the treatment and recycling facilities of livestock wastes; and 5) the strengthening of animal quarantine services for the prevention of entrance of foreign animal diseases and the establishment of a national animal disease control system.

In 1997, the Comprehensive Program for Hanwoo[native Korean beef cattle] Industry Promotion was introduced. The program aims to enhance the sector's competitiveness in preparation for the complete import liberalization scheduled in 2001. Main policy targets include, the nurturing of 10 thousand full-time Hanwoo herders by the year 2001, maintaining beef self-sufficiency rate of 30 percent in 2001, and the vertical integration centering on the Livestock Processing Centers(LPCs).

3. Horticulture

Major vegetables grown are the Chinese cabbages, radishes, red peppers, garlies, and onions. Vegetable production depends heavily on weather conditions. Demand for the horticultural products, especially vegetables, has increased in recent years with the increased incomes. Accordingly, the vegetable production has increased considerably over the 1970-1990 period. In 1996, the total vegetable production was 10.2 million MT, from the cultivated area of 389 thousand ha, compared to 8.7 million MT in 1990.

Fruit production is one of the most dynamic parts of the agricultural sector in Korea. It has increased rapidly from 833 thousand MT in 1980, to 1,766 thousand MT in 1990, and to 2,207 thousand MT in 1996. The area for fruit planting continues to grow. For example, in 1980 it was only 99,000 ha, but in 1996 the area for planting fruits has reached 173 thousand ha.

The fruit industry in Korea is dominated by apples, pears and mandarines. Fruit production, although depending heavily on weather conditions and farming techniques, has increased steadily. The demands for fruit and vegetables increased steadily in recent years with income growth. The per capita consumption of fruit has increased to 52.3 kg in 1996 from 22.3 kg in 1980. In 1993, fruit and

vegetable production accounted for about 30 percent of the total value of agricultural production.

There have been relatively little government intervention in the horticulture sector, reflecting that the sector is driven by market forces. However, the government emphasized, among others, the promotion of production and marketing for fruits, vegetables, flowers, and specialty crops. Main measures for the horticulture promotion policy include the subsidies and loans with lower interest rates for the glass-house facilities. Priorities are given to farmer groups and associated farms, aiming at the promotion of cooperative farming.

Other policies in horticulture industry include subsidies on the farmers' marketing facilities, wholesale markets and the distribution centers. Measures related to the export promotion of horticulture products are also subsidized. Participation in the international food fairs, advertisement and market survey are the examples.

As the horticulture promotion, especially the measures on glass-houses, involves a large amount of investments composed of the government subsidy, loans and farmer investments, there are many cases where farmers cannot afford the operational funds. Moreover, the payments of interest are burdensome. Recently, glass-house farmers are suffering from the increasing operating costs of heating fuels, caused by the devaluation of local currency.

IV. Labor, Land, Marketing and the Trade Policies

1. The Labor and Farm Policies

Agriculture in Korea suffers from the seasonal shortage of labor force, the lack of farm inheritors, and the farm operators' weakness in entrepreneurship. After the Uruguay Round agreements, the government paid a great attention to the strength of agricultural labor and the farming units.

Furthermore, the agricultural labor and farm policies comprise important elements in the policies aiming at the enhancement of agricultural competitiveness. It includes the systematic nurturing programs of the future farmers and full-time farmers, and the establishment and assistance of the incorporated farms and cooperative farms. In addition, the strengthening of rural education

through the assistance for agricultural high-schools and colleges are emphasized.

The farmer selected as the future farmer gets a subsidized loan for farming. Among their proposed areas for farming, livestock herding has been the leading sector followed by the rice and horticulture sectors. Since the introduction of future farmers program in 1981, 97,169 farmers were supported and have received the privilege loans. The average individual amount of loans increased substantially in 1993 to reach as high as 27 million won. The application is screened by the County-Level Committee on Rural Development. Farmers with solid intention of farming and training record are given the priorities.

In order to promote the full-time family farming specialized to one commodity, the government set up a loan program. For example, the full-time rice farmers get subsidized loans for the purchasing and leasing of paddy land and for mechanization. Full-time farmers for other commodities such as livestock and horticulture receive loans with low interests. Among the 71,229 full-time farmers who received loans during 1992 to 1997, 63,373 or 89.0 percent were concentrated on the rice sector.

The farming groups such as the cooperative farms and the incorporated farms are nurtured to overcome the inefficiency from the small-scaled farming prevailing in Korea. Most of the promotion programs laid priority on the farming groups in determining the recipients of privilege loans. As a result, the number of farming groups are 4,906. Among the groups, 3,487 were cooperative farms and 1,419 were incorporated farms at the end of 1996. It is, however, pointed out that a substantial proportion of the farming groups are not operating effectively enough to lead the agricultural sectors.

2. The Land Policy

The land policy is composed of two aspects: one is the public investments for the improvement of the physical basis of land, and the other is the institutional reform of farmland regulation. The farmland improvement program has been regarded as one of the most important policies in the agricultural sector, because it facilitates farm mechanization. The current farmland base improvement policy

includes the large-scale comprehensive agricultural development projects, reclamation, the irrigation and drainage improvements, and the farmland consolidation.

Irrigation and drainage improvements are mostly for the rice farming. Out of the total paddy field of 1.18 million ha, 76 percent is irrigated in 1996. However, the proportion of safe paddy land from the certain level of severe drought is much lower. Moreover, since the facilities are dated that leakage problems called for the renewal of investments also. The drainage improvement projects are implemented to increase the current rate of 34 percent.

The farmland consolidation involves the levelling, re-arrangement and the exchange of land parcels between neighboring owners. By the end of 1995, out of 1.3 million hectares of farmland, 53 percent was consolidated and 52 percent had undergone the drainage improvements. With a view to achieving the target to ensure that 75 percent of all paddy land finishes the drainage improvements by 2004, the government continues annual investments. Nevertheless, the rate of consolidated upland is much lower and it lags in the policy priorities.

In addition, the enlargement of farm-size comprises another important aspect of farmland policy. The Rural Development Corporation(RDC), under the guidelines of the MAF, operates an active policy to expand the scale of farming. The RDC purchases farmland from the non-farming landowners or the small-scale part-time farmers in the areas designated as the Agricultural Promotion Zone and sells the land to full-time farmers. To facilitate the financing, subsidized loans are available at a low annual interest rate of 3 percent.

The farmland policy reform is essentially summarized in the Farmland Act of 1994. As a matter of fact, land policy in the mean time has been governed by contradictory debate between the agricultural preservation and the industrial utilization. The fact is reflected by the reluctant process of the legislation of the Farmland Act. The Farmland Act includes, inter alia, the following elements: Firstly, it provides the basic definition of farmland as the limited resource for the food supply and for the proper management of national land. Second, the possible ownership of farmland is expanded from farmers to farming groups. Lastly, the limitation of a

farmer's holding of arable land within the designated Agricultural Promotion Zone is abolished.

3. The Marketing Improvement Policy

In 1994, the government issued the Marketing Reform Programs to improve the agricultural marketing in several ways. The focus was placed on restructuring the underdeveloped marketing channels. Behind the government plan was the belief that the current tools, methods, and programs were no longer effective to meet the rapidly changing marketing environments.

The agricultural marketing reform aims to modernize the marketing facilities and to improve the marketing efficiencies both in the production and consumption areas. In the program, all agricultural products should be brought into the mandatory auction system when sold in the wholesale markets. The major policy directions of agricultural marketing improvement are; first, to ensure a free, competitive market system, wherein prices reflect the supply and demand situations and the competition prevails among traders, marketing firms and marketing channels; secondly, to focus on a fair competition in the private sector and on improving the social infrastructure, and thirdly, to establish the optimum allocation and distribution channels for perishable food products at minimum costs.

In order to increase the bargaining power of farmers, a joint shipping program operated mainly by farmers was undertaken in some areas, intending to decrease the transport costs. The villages are encouraged to form or expand the joint production units. A considerable amount of investments has made in programs relating to market improvements and the village storage facilities in production areas. They include collection and delivery centers, chilled storehouses, cold-chain storage and the vehicles for transportation.

In addition, the promotion of standardization and grading system for the agricultural products are pursued to improve the transaction efficiencies. With the income increases, the food safety issues also given great attention.

4. The Agricultural Trade Policy

With the Uruguay Round agricultural agreements, agricultural trade policy has experienced a dramatic change. Most of the border protection measures are abolished and the tariffication is widely accepted except for rice. Since July 1997, except for some commodities of rice and beef, no quantitative trade restrictions remain. Consequently, agricultural exports were emphasized to make up for the losses of domestic markets.

Korea imports a majority of its food products. Imports of agricultural products include a wide range of commodities, although the composition is shifting. Particularly, a strong growth has occurred in animal products, the feed grains used to produce animal products, and fruits and vegetables.

Total agricultural imports have sharply increased over the last three decades. The rapid growth reflects rising income levels in the Korean economy. Korea was the world's sixth largest importer of agricultural products in 1997 and is a very important market for cereals and livestock products. The main suppliers of agricultural products to Korea are the United States, Australia and China.

Imports of agricultural products are expected to grow in the future because the domestic production will not be able to satisfy the

TABLE 2 Shares of Agricultural Trade

	units	1970	1980	1990	1995	1996
Exports:						
- total	US \$ million	835	17,595	65,016	125,058	129,715
- agriculture	US \$ million	25	541	795	1,243	1,424
- % of total	%	3.0	3.1	1.2	1.0	1.1
Imports:						
- total	US \$ million	1,384	22,292	69,844	135,119	150,339
- agriculture	US \$ million	341	2,215	3,754	6,899	8,152
- % of total	%	17.2	9.9	5.4	5.1	5.4

Source: MAF, Major Statistics of Agriculture and Forestry, 1997.

consumption growth. To some extent, the high increase in imports has been attributed to the high increase in high-quality foods, such as meat and some imported fruits.

The general trade policy has been based on free trade principles. Korea's remarkable economic development in the industrial sector over the past four decades has been dependent on overseas markets as well as the favorable free trade environment within the GATT framework.

As the imports of various agricultural products increase, Korea depends more on foreign supply of foods. The stable procurement in the international market and maintaining stocks are the major policy goals for most of the food items. However, as agricultural production is vulnerable to unfavorable weathers and natural disasters, it is regarded important to secure self-sufficiency of the staple foods. In the sense, the agricultural trade policies in Korea pursue one goal of food security with the emphasis of two different measures.

V. Rural Development and Welfare Policy

1. The Rural Development Policy

In order to promote economic activities and employment related to the manufacturing and service sectors in the rural areas, the relevant ministries led by the MAF have been financially and institutionally assisting the establishment and operation of the Rural Industrial Complex since 1984. Responsibilities of participating ministries include, among others, the assistance for firms housed in the Complex, preparing and levelling the land, and support of the facilities to protect the environment. The Agriculture and Fisheries Development Plan reinforced the promotion of the Rural Industrial Complexes.

The specific areas under the rural non-farm activities promotion programs include the assistance to the Rural Industrial Complexes, the food processing firms, the specialty-products processing, the recreational farming, and the local distribution centers for agricultural products. Among the above project areas, the Rural Industrial Complexes receive the largest amount of funding and they create the most job opportunities for the rural residents.

Due to the inferior infrastructure, low consumer demand, and

various other reasons, some of the rural factories have shut down. Furthermore, the new firms' relative shut-down rate, compared to the firms outside the Complexes, is higher due to the lack of financial and managerial abilities of the entrepreneurs involved. The rural development policy also emphasizes the promotion of food processing firms and local specialty manufacturers, and the improvement of local agricultural marketing facilities. The MAF set targets for each activity in terms of the amount of budget outlays.

In facilitating the rural industrialization, the indirect supporting measures are mainly composed of an institutional change and the overhead capital improvement programs. With respect to the regulations related to the land zoning, less rigorous rules are applied when the local government designates certain areas as the Rural Industrial Complexes. Local roads and water-supplying facilities are the major areas in need of infrastructural improvement.

The Agriculture and Fisheries Development Plan aims to change traditional shape of agriculture which is based mainly on producing crops and livestock products. The processing and marketing industries, utilizing the agricultural products as raw materials are promoted under the policy goal of the multiple sectorization of agriculture, which is designed to achieve the vertical integration within farms, cooperative farms, or the incorporated farms. Examples are abundant in the fruit-growing, livestock, and rice industries. The cooperatives growing kiwi fruit and apples have

TABLE 3 Specific Policy Areas of the Rural Development

	Unit Numbers until 1996	2004 Target	Investments (bil.won)	Employment (thou.persons)
Rural Industrial Complexes	285	400	1,009	100
Food Processing Firms	1,231	2,000	377	7.6
Specialty-Products Processing	665	1,600	170	
Recreational Farming	506	1,176	110	3.5
Local Distribution Centers	3,081	4,160	166	

Source: MAF

founded fruit canning firms in the rural areas. They process raw crops into juice and sell the products in markets with higher added value. The licensing system for food processors has been changed to a registration system in order to facilitate farmers' entrance into the business. In addition, the matching funds of the local governments are now provided to farmer's cooperatives for investment purposes.

2. The Farmer Welfare Policy

The farmer welfare policy is conducted in a cooperative manner among the relevant ministries. Major areas of welfare policy include the improvement of rural education, the introduction of farmers pension system, and the betterment of rural medical facilities.

Problems in the education, especially at the primary and secondary school levels, comprise the most troublesome areas of the rural life. Many rural parents decide their rural-urban migration only because of the educational difficulties. One major breakthrough has been made by the special college entrance quota for the rural high-school students. Colleges are encouraged to accept students from rural high schools within 3 percent of the total enrollment. The program sometimes was referred to as one of the most successful policy changes after the Uruguay Round agreements.

In order to solve the problems of the aged farmers after the retirement, the government introduced the rural pension system targeted at farmers. Farmers and fishers pay the subsidized monthly payments for the pension. The medical betterment programs include the expansion of rural medical facilities, the improvement of medical services and the reduction of medical costs. Besides the budget layout from the Specific Tax for Agricultural and Rural Development, institutional reforms are accompanied to achieve the policy goals. For example, a biannual medical check-up is provided to the farmers and the home visits by doctors are arranged by the local medical detachments.

VI. Investment and Capital Formation

The government originally planned to expend about 35 trillion won in implementing the Agriculture and Fisheries Development Plan during

the period of 1992 to 1998. In addition, budget of 15 trillion won from the Specific Tax for Agricultural and Rural Development was scheduled to be used for new agricultural and rural development projects during 1994 to 2004. With the economic difficulties ensued by the foreign exchange crisis since late 1997, the government cut the agricultural budget for 1998. The investment plan up to 1998 was rounded up with less than the planned amounts. Also, the Specific Tax is being considered to be abolished.

Total agricultural budget in 1998 is about 7.7 trillion won, 3.7 percent below the 1997 budget. The budget on agriculture has increased steadily in the 1970s and 1980s. The MAF budget accounted for about 10 percent of the total government budget during the period 1990-1995. The proportion of the MAF budget to the total national budget continued to increase gradually, from 5.3 percent in 1975 to 5.7 percent in 1980, and 12.4 percent in 1995, remaining stable at around 10 percent in the mid-1990s. With the reduced budget, the proportion decreased recently.

The total agricultural budget of around 7.7 trillion won in 1998 can be divided into investment and loans, subsidies, and organizational costs. The investment for structural development was the major items of the total agricultural budget and it increased to 62.1% in 1996 from 52.3% in 1995. This trend continued until 1997 due to the 15 trillion won investment plan by the funds from the Specific Tax and 35 trillion won investment plan for the farming and fishing village structural adjustment.

VII. Concluding Comments

1. Evaluation of the Policy Reform

After the Uruguay Round agreements, the agricultural policy has experienced a profound change in Korea. It has been a reform in the sense that the Korean agricultural policy is designed in acceptance of the market liberalization, for the first time in its history.

Since basically the Korean government endeavored to take full advantage of the Uruguay Round implementation period, it increased agricultural budget outlays. The original 10-year investment plan for the structural adjustment established in 1991 and launched in 1992

was rescheduled to be finished by 1998, three years earlier than the schedule. In addition, investment was made by the revenues from the Specific Tax for Agricultural and Rural Development. The background logic for the budget increase was to accomplish the investment for physical bases and marketing facilities and, thus, secure the international competitiveness for the major commodities.

Institutional reforms that accompanied the investments and financial assistance also contributed to the efficient implementation of the programs. One of the most important elements of the institutional change is the reformed process of screening the recipients of the various subsidy programs. In the new process, a transparency of selection is emphasized.

According to the results of policy evaluation by the Korea Rural Economic Institute, the overall productivity of agriculture has improved due to the programs. It is a remarkable achievement in comparison to the unstable rural situations right after the conclusion of the Uruguay Round negotiations. Also, the agricultural prices have shown a relatively lower increasing rate compared to the general price index, reflecting agricultural sector's contribution to the overall price stabilization. In addition, the output composition of high added-value agricultural products such as glass-house horticultural products, livestock products, and other cash crops has increased. The expansion of operation scale in the rice sector has been successful in some areas with favorable conditions. The beef sector, with the investments in production facilities, gained in the productivity.

2. The Remaining and New Policy Issues

There have been issues that require further adjustments in the Agricultural and Rural Development Programs. It is pointed out that there has been no clear statement of the policy objectives. For example, no target for the food self-sufficiency level is specifically presented. Instead, with the emphasis on the market-oriented rice policy, a substantial area of the farmland is excluded from the promotion of agricultural productive basis.

Moreover, there is a criticism on the approach method for the competitiveness enhancement. Most of the programs are criticized to be commodity and project specific and have little connection with

each other. There has been no comprehensive assistance program for the farmers. For example, the rice programs are concentrated on the physical improvement of paddy land without paying enough attention to the economies of scale and farm management. The horticulture and livestock farming received subsidies and privilege loans without enough managerial training. As a result, the farm operations became fragile to the market changes. The concentration of investment and loans to the above-average farms brought about wide dissatisfaction on the programs among the medium to small-scale farms.

Inefficient marketing of agricultural products incurred high marketing margins. It has been the cause of low producer prices and high consumer prices. Even if the marketing reform has been pursued, it could not create an efficient transaction environment. Also, it was not successful to lower the over-charged margins of the middlemen. The weak cooperative marketing at the producer level and the lack of direct marketing through the urban consumer coop could not provide an alternative marketing channel.

The local governments' abilities to finance and manage the huge amount of matching funds was not satisfactory in various provinces and counties. In addition, the autonomy from the central government was not enough to design their own agricultural policy measures.

In addition to the remaining policy issues described above, there are new policy issues aroused by the changes in policy environment. The economic crisis and the International Monetary Fund(IMF)-initiated mandatory reform programs for the Korean economy has brought about a completely different policy environment since the end of 1997. It has been agreed between the Korean government and the IMF in connection with the bailout loan.

The demand for the agricultural products is expected to decrease, while the production costs increase due to the high exchange rate. The agricultural cost increase is the most serious in sectors which result in high energy consumption and the use of imported inputs. Furthermore, due to the tight budget, agricultural investment and loans have already been reduced. The government had to finish the investment programs with smaller amount in 1998 than what was originally planned.

Considering the economic situations, the MAF is working out

new rural development programs. It is discussed and shaped within the three ministerial committees: the Committee on Agricultural Policy Reform, the Committee on Agricultural Marketing Reform, and the Committee on Cooperative Reform. On receiving the recommendations of the committees, the MAF is planning to propose the new programs by August 1998.

In the 1998 annual policy guideline reported to the President, the MAF stressed four points: the self-sufficiency in rice, the reform of agricultural marketing, the nurturing of pro-environment agriculture, and the promotion of agricultural exports. The detailed programs are expected to be shaped according to the basic guidelines.

The economic shock struck Korean agriculture during the Uruguay Round implementation period. It is a challenging task to achieve the structural adjustment in agriculture with a tighter budget. Also it is expected to be more complex to achieve further institutional reforms. Consequently, the efficiency in agricultural programs would receive more attention than ever before.

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