Chapter 2

Agricultural Resources and Structure

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Chapter 2. Agricultural Resources and Structure

1. Farmland

Overview of Farmland in Korea

As of the end of 2013, Korea has 10,027 thousand ha of land area. Farmland makes up 17.1% of land in Korea, or 1,711 thousand ha, with 964 thousand ha of rice paddies and 748 thousand ha of fields. According to whether it is designated as an agricultural development zone, which corresponds to preserved farmland, the size of agricultural development zones is 808 thousand ha, or 47.2% of total farmland, while the farmland area outside of agricultural development zones is 903 thousand ha (Table 2-1). The total farmland area has been on a downward trend since the 1970s, while agricultural development zones began to shrink after a steady rise during 1992-2005. The total size of agricultural development zones plummeted after some regions were de-designated in 2007-2008.

Table 2-1 Designation of Agricultural Development Zones

Unit: 1,000 ha, %

		2000	2005	2006	2007	2008	2009	2010	2011	2012	2013
Size of total farmland (A)		1,889	1,824	1,801	1,782	1,759	1,737	1,715	1,698	1,730	1,711
Size of agricultural development zones (B)		919	919	917	882	815	811	807	807	809	808
Ratio (B/A)		48.7	50.4	50.9	49.5	46.3	46.7	47.1	47.5	46.8	47.2
Zone category	Agriculture promoted zone	790	792	790	763	758	754	751	751	753	752
	Agriculture protected zone	129	127	127	119	57	57	56	56	56	56
Land category	Rice paddies	768	771	769	751	716	713	710	710	712	711
	Fields	151	148	148	131	99	98	97	97	97	97

Source: Ministry of Agriculture, Food and Rural Affairs.

Korea's cultivated land per capita is 0.04ha, which is very small compared to major advanced countries (U.S. 1.5ha, France 0.5ha, UK 0.3ha). Therefore, its food self-sufficiency rate is very low. Although the self-sufficiency rate of rice, the staple crop, is almost 100% because of government investment in the production base and decline in rice consumption, the self-sufficiency rate of grains as a whole is merely 23.1% as of 2013. Despite the low self-sufficiency rate of food, a considerable share of farmland under worsening farming conditions has become idle land or forest due to continued expansion of agricultural imports, and such a trend is projected to continue. In recent years, about 40,000ha of farmland have become idle every year, and much of the deserted land has turned into a land that is difficult to use again. Apart from the idling of farmland, about 15,000ha of farmland are converted to other uses every year. As a result, farmland continues to decrease despite various efforts to create and preserve farmland.

Transformation of Farmland System and Policy

According to the current Farmland Act, "farmland is the foundation for supplying food and preserving the territorial environment of the country. Since it is a precious resource that has influence on balanced development of agriculture and national economy, it should not only be preserved carefully, but properly managed in tune with the public interest, and the exercise of rights entails necessary restrictions and obligations" (Farmland Act Article 3). The law explicitly states that "farmland cannot be owned by anyone other than those who use it or intend to use it for farming of his or her own self." Specifically, the law has adopted an acquisition

qualification system titled “Issuance of Qualification Certificate for Acquisition of Farmland” and authorizes the acquisition of farmland to only eligible applicants after checking and examining the eligibility and ownership ceiling of a prospective buyer. The law has also adopted “Disposition Order” and “Charge of Forcing Execution” as post-management tools to handle the failure to comply with the original purpose of the acquisition. In other words, the land-to-tiller principle forms the basis of farmland ownership and use.

Such a farmland ownership and usage system that centers around farmers who own farmland was established through a farmland reform in 1950 in accordance with the Farmland Reform Act of 1949 and forms the basis of today’s farmland system. The main purpose of the Farmland Reform Act was to end the abuses of the past landlord-tenant system and foster self-employed farmers as a means to build a stable social foundation. Specifically, the government created self-employed farmers by buying the farmlands of landlords and distributing a maximum of 3ha of farmland to actual farmers. Acquisition of farmland by non-farmers and ownership of more than 3ha of farmland were restricted, and the government regulated the acquisition of farmland by issuing farmland transaction certificates. The basic structure of “upper limit of farmland ownership” and “farmland transaction certification” has been maintained until recently.

Since the late 1960s, the use of farmland for purposes other than farming increased rapidly due to urbanization and industrialization, and in the 1970s, the world experienced an oil crisis and food shortage. Alarmed by these challenges, the government enacted the Farmland Preservation and Utilization Act in 1972 and strictly

restricted the diversion of farmland for non-agricultural purposes. The core content of this law was to selectively protect farmland by designating them as "absolute farmland" and "relative farmland." Absolute farmland was designated for mostly rice paddies and other farmland that need to be strictly protected, and "relative farmland" for other types of farmland. The government also required anyone who intends to use farmland for other purposes to obtain government permission and pay a fee to the Farmland Management Fund to bear the "farmland creation cost" in making alternative land available for farming. During this period, the government's will to preserve farmland was stronger than in any other period.

However, the number of non-farmers owning farmland rose due to desertion of farming and inheritance of farmland, and farmland price rose and became high relative to the profitability of farming. As these problems emerged, it became difficult to follow the land-to-tiller principle. Accordingly, the realistic question of whether or not to recognize and authorize the legally banned farmland lease from the perspective of reforming the agricultural structure attracted attention and prompted the legislation of the Farmland Lend-Lease Management Act in 1986.[1)]

In addition to the discussions in the late 1980s and afterward on further opening of the domestic agricultural market, the need to foster competitive agricultural enterprises was raised. As a result, the Act on Special Measures for Development of Agricultural and Fishing Villages was enacted and enforced, authorizing farmland ownership of agricultural enterprises and relaxing regulations on

1) However, due to the resistance of absentee landlords, the enforcement of the law was postponed.

farmland. The Farmland Reform Act of 1949 did not allow farmland ownership of enterprises, but rather recognized the ownership and use of farmland by self-employed family farms. The authorization of farmland ownership of enterprises was a big change. Also, the means of preserving farmland, too, has changed. The plot-based farmland preservation system of designating absolute and relative farmland was abolished and a new system of designating good collectivized farmland as "agricultural development zone" was introduced, replacing the plot-based system which was introduced in 1972. In other words, the plot-based farmland preservation system has been converted to the zone-based farmland preservation system. In addition, the government eased restrictions on farmland use and conversion and raised the ownership ceiling to 10ha from 3ha to flexibly respond to agricultural imports. Also, the Farmland Act was enacted in 1994 by combining all the preexisting laws related to farmland, such as the Farmland Reform Act (1949), Farmland Preservation and Utilization Act (1972), Farmland Lend-Lease Management Act (1986), and Rural Development Special Act (1990). The Farmland Act, which is a comprehensive legal system related to farmland, was implemented in 1996 and is currently in force.

Even though the Farmland Act clearly stipulates strict compliance with the land-to-tiller principle, regulations on ownership and use of farmland have been greatly eased in accordance with changes in socio-economic circumstances. Restrictions on farmland ownership were reduced greatly, too. An amendment to the Farmland Act in 2003 enabled non-farmers to own a land of less than 1,000㎡ for the purpose of using it to experience farming or as a weekend farm. Also, a farmland bank was introduced in 2005. As a

result, it became possible for non-farmers to own a limited amount of farmland if they lease it to the farmland bank on a long-term basis. Such an authorization of farmland ownership partially broke the principle that strictly restricted farmland ownership for reasons other than self farming, and brought about a de facto effect of allowing non-farmers to own farmland. Also, the scope of authorized farmland ownership was further expanded and it became possible for agricultural stock companies to own farmland.

In 1993, the ownership ceiling of 3 ha of farmland in agricultural development zones under the Farmland Reform Act was raised to 10 ha (20 ha on condition of approval by a mayor or county governor). In 1999, the ownership ceiling itself was abolished for farmlands in agriculture development zones. Ownership limit for farmland outside of agriculture development regions was expanded to 5 ha in 1999, but abolished in 2002 after 50 years in existence.

Legal System for Farmland

Even though many laws related to farmland were integrated, the farmland system is still based on a variety of laws (Table 2-2). Specifically, there are the Constitution, the highest law in the land, the Framework Act on Agriculture and Fisheries, Rural Community and Food Industry, which sets the basic direction for rural and agricultural development, the National Land Planning and Utilization Act, which deals with the use and management of the national territory, the Rearrangement of Agricultural and Fishing Villages Act, which deals with development and maintenance of living environment, tourism and leisure resources, and low-productivity farmland, the Islands Development Promotion Act, and

the Small Rural Municipalities Development Promotion Act, and other individual laws. Therefore, it is not only difficult to compile all farmland related laws into a single legal system but it is also inappropriate to simplify and interpret the multi-faceted nature of farmland based on one perspective.

In summation, the basic philosophy and principles about farmland in legal sense are clearly stated in the Constitution and the Framework Act on Agriculture and Fisheries, Rural Community and Food Industry, and the methods of achieving this institutionally are stipulated in the Farmland Act.

In regard to land ownership as indicated above, the Constitution and the Farmland Act clearly state the land-to-tiller principle: "The farmland shall not be owned by any person unless he or she uses it or is going to use it for their own purpose of managing agriculture." However, even though farmland ownership is limited to farmers and

Table 2-2 Coverage of Farmland by Major Laws

	Farmland Act	Constitution	Framework Act on Agriculture and Fisheries, Rural Community and Food Industry	National Land Planning and Utilization Act	Rearrangement of Agricultural and Fishing Villages Act	Other laws
Ownership	○	○	○			
Use	○	○	○			
Preservation	○	○	○	○		△
Conversion	○	○		○		△
Rearrangement	△		○		○	△
Creation					○	

○ : stipulated in detail, △ : partial reference

agricultural enterprises, there are exceptions for non-farmers who happen to own farmland as a result of people leaving the farming profession and people inheriting the land. Also, exceptions are granted to those non-farmers who use farmland to have experience in farming and who use it as a weekend farm under the condition that the farmland does not exceed a certain size.

As for use of farmland, leasing and entrusted management of farmland is allowed on a restricted basis in accordance with the laws. The Farmland Act permits farmland leasing if the ownership of the farmland was transferred upon migration or succession. In 2005, the revised Farmland Act empowered the Korea Rural Community Corporation to serve as a farmland bank, and lease on any farmland was allowed if the land was entrusted to the bank for a long-term lease. With the introduction of the farmland banking system, farmland lease is allowed in a broader range of cases.

In regard to preservation of farmland, the government introduced an agricultural development zone designation system to preserve premium farmland that has been rearranged or collectivized. The system requires permission, registration and consultation to convert farmland for non-farming purposes. In the case of collectivized high-quality farmland that is designated as agricultural development zones, the government restricts farmland conversion except for installation and construction of agricultural facilities and social infrastructure to help preserve the farmland.

Meanwhile, the National Land Planning and Utilization Act manages the development and preservation of the entire national territory by specifying and placing different zones and restrictions based on a zoning system. The farmland management system

Table 2-3 Designation of Land Use Purpose under the National Land Planning and Utilization Act, 2014

Before	Urban Region (residential, commercial, industrial and green belt)	Semi-Urban Region	Semi-Agricultural and Forest Region	Agricultural and Forest Region	Natural Environment Preservation Region
Revised	Urban Region (residential, commercial, industrial and green belt)	Management Region (planning, production and preservation)		Agricultural and Forest Region	Natural Environment Preservation Region
Size (km^2)	17,597	27,155		49,344	12,006
Ratio (%)	16.6	25.6		46.5	11.3

Source: Ministry of Land, Infrastructure and Transport (2015)

was transformed as the National Land Planning and Utilization Act was enacted on January 1, 2003. The new law was created by combining related acts. Of the existing five zones, semi-urban and semi-agricultural zones were integrated into “management zones,” and “management zones” were subdivided again into “planned management zones,” “production management zones” and “preservation management zones.” Farmlands in general are found mainly in “agricultural zones” and “production management zones.” Even so, a lot of farmland exist in urban regions in the form of green areas. As restrictions vary from zone to zone, the demand for farmland conversion differs.

Use and Conversion of Farmland: Facts and Figures

Amid an overall decline in the farmland area, the number of farms fell sharply, while arable land was lost relatively slowly. As a result, the cultivated land area per farm household saw a gradual rise from 0.93 ha in 1970 to 1.19 ha in 1990, 1.37 ha in 2000, 1.46 ha in 2010 and to 1.51 ha in 2014. Still, Korea’s cultivation area per

Table 2-4 Farms by Arable Land Area

Unit: household, %

	Under 0.5 ha	0.5-1 ha	1-2 ha	2-3 ha	Over 3 ha	Total
1995	456,900 (30.4)	432,107 (28.8)	417,960 (27.9)	123,333 (8.2)	70,445 (4.7)	1,500,745 (100.0)
2000	454,775 (32.9)	378,655 (27.4)	351,534 (25.4)	113,790 (8.2)	84,714 (6.1)	1,383,468 (100.)
2005	474,832 (37.3)	330,651 (26.0)	280,685 (22.1)	93,295 (7.3)	93,445 (7.3)	1,272,908 (100.0)
2010	486,213 (41.3)	287,695 (24.4)	228,540 (19.4)	78,240 (6.7)	96,630 (8.2)	1,177,318 (100.0)
2014	480,454 (42.9)	261,575 (23.3)	207,630 (18.5)	73,580 (6.6)	97,535 (8.7)	1,120,776 (100.0)

Source: Statistics Korea.

farm is very small compared to the US, France, the UK and Germany, requiring an aggressive expansion of farming scale.

The structure of farms by cultivated land size shows a difference between before 1990 and after. During 1965-1990, small farms and relatively big farms decreased continuously in number, while mid-sized farms increased. However, a polarized distribution of cultivated land began to appear from the 1990s: the ratio of mid-sized farms with arable land of 0.5-2.0 ha dwindled, whereas the share of farms with cultivated land of less than 0.5 ha and over 2 ha jumped (Table 2-4). While cultivated land area per farm is increasing slowly, the concentration of farmland in bigger farms is rising at a fairly rapid pace. During 1995-2014, the share of farms with over 3.0 ha of farmland jumped from 4.7% to 8.7%.

The ratio of leased farmland rose from 17.8% in 1970 to 37.4% in 1990, 47.9% in 2010 and to 50.0% in 2013, even though the

Farmland Act prohibits farmland leasing.[2] The reason for the rise in farmland lease is that, on one hand, farmland ownership by non-farmers has increased due to farmers leaving the profession and non-farmers inheriting the land and, on the other hand, most farms are expanding their business scale rather by leasing farmland than by buying farmland on economic grounds.

Farmland expanded due to continued reclamation works since the 1950s, before entering a downward trend since 1970 with a boom in the conversion of farmland arising from urbanization and industrialization. During the period of Korea's rapid economic growth, significant swathes of farmland were converted to other uses, such as residential, commercial-industrial and public use, as the population grew and urbanization and industrialization progressed. Furthermore, worsening conditions for agriculture have steadily increased the amount of idle farmland, reducing total farmland area from 2.298 million ha in 1970 to 1.715 million ha in 2010 and to 1.691 million ha in 2014. The abandoned farmland

Table 2-5 Idle and Converted Farmlands

Unit: thousand ha

	1970	1975	1980	1985	1990	1995	2000	2005	2010
Cultivated land	2,298	2,240	2,196	2,144	2,109	1,985	1,889	1,824	1,715
Idle land	n.a.	n.a.	n.a.	20.2	40.4	64.6	16.8	44.2	50.5
Converted land	n.a.	0.5	1.0	2.1	10.6	16.3	9.9	15.7	16.4

Source: Ministry of Agriculture, Food and Rural Affairs.

2) The share of tenant farmers represents more than 60% (60.3% in 2012).

area, three to four times the converted land area, is increasing driven mainly by poor production infrastructure and labor shortages. Greater opening of the agricultural market in recent years is also creating difficult farming conditions, resulting in a steady rise in the area of idle farmland.

The problem with farmland conversion is, above all, even best farmland in agricultural development zones is being converted to other uses at a large scale. Development of innovation cities in the mid-2000s, in particular, contributed to the conversion of farmlands in agricultural development zones on a wider scale.

Table 2-6 Farmland Conversion by Type of Use

Unit: ha

Year	Total Converted Area	Government and Public Facilities	Housing Facilities	Mining and Manufacturing Facilities	Agricultural and Fishery Facilities	Other
1980	975 (100)	289 (29.6)	264 (27.1)	125 (12.8)	30 (3.1)	267 (27.4)
1985	2,122 (100)	1,327 (62.5)	296 (13.9)	200 (9.4)	50 (2.4)	249 (11.7)
1990	10,593 (100)	4,474 (42.2)	2,229 (21.0)	2,415 (22.8)	593 (5.6)	882 (8.3)
1995	16,295 (100)	5,252 (32.2)	2,352 (14.4)	1,675 (10.3)	4,687 (28.8)	2,313 (14.2)
2000	9,883 (100)	4,059 (41.1)	1,742 (17.6)	1,142 (11.6)	1,581 (6.0)	1,359 (13.8)
2005	15,659 (100)	7,396 (47.2)	2,340 (14.9)	862 (5.5)	2,245 (14.3)	2,816 (18.0)
2010	18,732 (100)	7,603 (45.9)	4,378 (13.3)	2,766 (13.7)	768 (4.9)	3,217 (22.2)
2014	10,718 (100)	3,950 (36.9)	2,311 (21.6)	1,198 (11.2)	579 (5.4)	2,662 (24.9)

Source: Korea Rural Community Corporation, Statistics on Farmland Conversion.

In terms of farmland conversion by land use, government and public use accounts for the largest share, whereas the use for agricultural facilities represents only a small portion except in the early and mid-1990s and the mid-2000s. In the early and mid-1990s, restrictions on farmland conversion were eased significantly and greenhouse farming exploded, increasing farmland conversion for agricultural use. As of 2014, however, only 5.4% of converted farmland was for agriculture and fisheries facilities (Table 2-6). The revision of the Farmland Act in 2007 allowed farmers to build livestock barns without government permission, and it seems like that this has partially contributed to the increase in farmland conversion. But when seen on a larger scale, it can be seen that socio-economic conditions have caused a change not only in the amount of converted farmland but also the purpose of the conversion.

Farmland Mobilization Policy

Farmland mobilization, which encourages business expansion to improve the agricultural structure, is carried out through the Farm Scale Expansion Project and the farmland bank project. The Farm Scale Expansion Project began in July 1990 in an effort to expand farming scale, promote farmland collectivization, cut production costs and increase competitiveness through trade, long-term lease and exchange, subdivision or combination of farmland. After changes in its project goals, eligibility rules for assistance, loan rates and others, the project was carried out together with a comprehensive program for the rice industry in December 2004. It aimed to create 70 thousand rice farms of 6 ha of rice paddies, which could occupy half or 420 thousand ha of rice fields in Korea by 2013. During 1990-

2013, the Farm Scale Expansion Project succeeded in expanding and collectivizing 167 thousand ha of farmland with 6.8 trillion won of loans, bringing up the average scale of rice farms from 2.5 ha in 1995 to 5.9 ha in 2013.

The farmland bank project aims for efficient use of farmland by promoting leases and purchase of farmland, stable incomes for farmers and farmland market stability. Projects related to farmland mobilization include the farmland lease project and the project to purchase and stockpile farmlands. The farmland lease project was designed to hold leasable farmland in trust and lease the land out to full-time farmers on a long-term basis. Leasable farmland refers to fields that are being used for growing rice, vegetables and fruit combined with agricultural facilities attached to the land. The lease period is over five years and annual rent is determined by agreement between the farmland bank and the tenant. The farmland bank deducts 5% of the rent and pays the remaining to the landlord. Despite the disadvantage from its commission system, the farmland lease project is welcomed by landowners who fail to farm and are willing to rent the property. Meanwhile, the project to purchase and stockpile farmlands is dedicated to reduce adverse effects on farmers caused by farmland price falls when a drop in the number of farmers increases farmland sale. Under the project, farmland in agricultural development zones is purchased from farmers who retire or leave the business, and is long-term leased on condition that ownership is maintained not to disturb the farmland market. Eligibility for farmland leasing is limited to individuals or companies that intend to farm, including full-time farmers, and five years of lease period can be extended.

Outlook and Tasks

As the domestic market further opened to agricultural imports, the business conditions for agriculture worsened. As a result, the amount of idle farmland has been increasing and this trend is expected to continue in the future too. The total farmland size is also expected to continue decreasing along with the rise in the amount of farmland being converted to other uses. The amount of farmland either owned by non-farmers or leased is also expected to rise due to deregulation of ownership and use of farmland. The situation is that it is necessary to continue making efforts to increase the farm scale per farm as part of the effort to improve competitiveness. And leasing farmland is a more preferred method of increasing the cultivated land per farm over purchasing farmland.

These circumstances present a set of challenges for the current farmland system. What comes first is to reconcile the disparity between the ideality of the Land to the Tillers principle and the land-owning farming system stated in the Constitution and the Farmland Act and the reality of increasing ownership and use of farmland by non-farmers. In order to address the underlying problems of the current system, principles of farmland regulations should focus rather on who uses land than on who owns land, which means restrictions on the ownership of farmland are eased but restrictions on the conversion of farmland to other purposes are intensified. Strong restrictions on farmland conversion are an essential prerequisite for shifting to use-based regulations.

The second challenge is to come up with measures to secure an appropriate amount of farmland in a way that ensures stable food self-sufficiency, at a time when grain self-sufficiency rate is below

30% and abandoned farmland area is growing. There is a need to achieve social consensus on preserving an optimum amount of farmland, and to seek ways of managing idle farmland and securing farmland that can be utilized in times of food crisis.

Third, the current lack of management of farmland, such as trading and leasing of farmlands, requires an integrated management organization that improves the agricultural structure through mobilization of farmland and promotes efficient use and preservation of farmland. The goal of the organization includes: controlling the registration and management of farmland trades and leases; promoting the purchase, lease and scale-up of farmland; planning management by land-use plans; tracing the total amount of preserved farmland; and managing information on farmland.

Fourth, under the current environment where the multi-functionality of agriculture and rural villages is stressed, planned management of rural space and prevention of thoughtless development have become major challenges. Important rural amenity resources are disappearing due to emergence of buildings that do not blend with the landscape, livestock barns that are not in harmony with the ploughing and sowing of agriculture, and various facilities installed randomly in different locations. As this problem is related with farmland conversion and planned management of space, it is necessary to seek a comprehensive way to manage rural space under a plan. For instance, various action plans, such as the adoption of the 'plan before development' principle, are required to prevent thoughtless development of farmland.

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2. Agricultural Structure

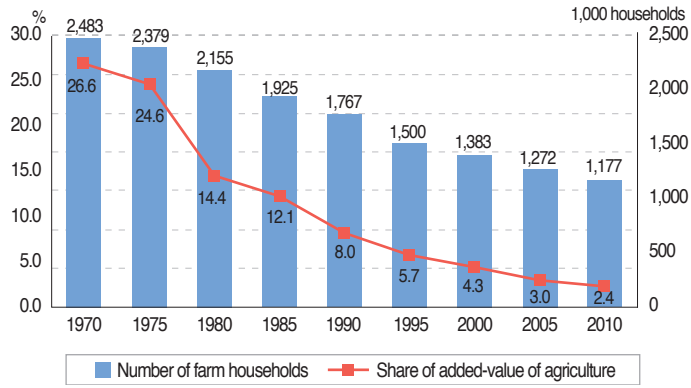
Current Status of Agricultural Human Resources and Aging Farmers

A decrease in the share of agriculture in the Gross Domestic Product (GDP) is one of the common traits of countries that join the ranks of advanced countries through economic development. Korea experienced a two to five times more rapid change in the industrial structure compared to other advanced countries. Korea's agricultural industry contracted in scale and became vulnerable in the manpower structure, as the nation focused on the commercial and industrial development. As a substantial number of rural populations left the rural villages in search of job opportunities in cities, the agricultural population engaged in farming plummeted.

Added-value of agriculture in the Gross National Income (GNI) was 26.6% in 1970, 14.4% in 1980, 8.0% in 1990, 4.3% in 2000, and 2.4% in 2010, decreasing yearly 6.0% on average between 1970 and 2010. The number of farm households[1] was 2,483 in 1970, 2,156 in 1980, 1,767 in 1990, 1,383 in 2000, and 1,177 in 2010, dropping 1.5% yearly on average. The agricultural population decreased to 3,063 households in 2010 by 3.9% on yearly average from 14,422 households in 1970, and the share of workers engaged in agriculture, forestry, and fishery in the total economically active population dropped from 48.2% to 6.3%.

1) The Framework Act on Agriculture and Fisheries, Rural Community and Food Industry defines "farmers" as individuals who manage or cultivate more than 1,000 square meters of farmland, or farm managers whose annual sales of agricultural products exceed 1.2 million won, or those who engage in agricultural activities for more than 90 days per year, or those employed more than a year by agricultural corporations (farming association corporations and agricultural company corporations) who are engaged in shipment, distribution, processing, and sales activities for agricultural products.

Figure 2-1 Changes in the Share of Added Value of Agriculture and in the Number of Farm Households



Source: Statistics Korea. Agricultural Census of Each Year; Ministry of Agriculture and Forestry. Major Statistics on Agriculture, Forestry and Food.

The fall in farming population has had an adverse impact on sustaining and developing the agriculture in Korea. However, the problem lies not in the decline itself, but in the aging of agricultural population. In 1970, people in their 20s and 30s accounted for 35.2% of the total farm owners and people over 60 took up 15.2% only. The shares of these two became similar as 23.0% and 20.3% respectively in the 1980s, but the share of people over 60 became greater to be 31.3% while that of people in the 20s and 30s became 14.6% in 1990. The shares of the two were 6.6% and 51.0% in 2000, and 2.8% and 60.9% in 2010, and the youth population drastically fell and the aged population increased.

Agricultural population aging is particularly serious compared to other major countries. If we look at the ratio of farm owners below 35 years old (A) to farm owners over 55 years old (B), the ratio of A to B was 0.107 for 27 EU countries, 0.121 for the U.S., and 0.04 for the

Table 2-7 Farm Owners by Age

Year / Age	1970		1980		1990		2000		2010	
	Frequency	%	Frequency	%	Frequency	%	Frequency	%	Frequency	%
Total	2,483	100.0	2,155	100.0	1,767	100.0	1,383	100.0	1,177	100.0
Up to 29	215	8.7	129	6.0	36	2.1	7	0.5	2	0.1
30-39	657	26.5	367	17.0	221	12.5	84	6.1	31	2.7
40-49	662	26.7	664	30.8	372	21.1	237	17.2	140	11.9
50-59	569	22.9	555	25.8	583	33.0	348	25.2	287	24.4
Over 60	377	15.2	437	20.3	552	31.3	706	51.0	716	60.9

Source: Statistics Korea. Agricultural Census of Each Year.

United Kingdom and Italy in 2007. The ratio of A to B was 0.186 for Korea in 1990, which surpassed the 2007 level of France; 0.045 in 2000, which is the 2007 level of the UK; and 0.004 in 2013, showing an unprecedented pace of population aging in the world.

Table 2-8 Aging of Agricultural Population in the Major Countries

Countries (Surveyed Year)	Under 35 years old (%) (A)	Over 55 years old (%) (B)	A/B
Denmark (2007)	6.0	44.6	0.135
France (2007)	7.9	40.9	0.193
Italy (2007)	2.9	68.0	0.043
The Netherlands (2007)	3.9	44.5	0.088
The United Kingdom (2007)	2.6	61.7	0.042
EU-27	6.1	56.8	0.107
The United States (2011)	3.9	32.1	0.121
South Korea (1990)	7.3	39.3	0.186
South Korea (2000)	2.2	48.5	0.045
South Korea (2007)	0.6	73.9	0.008
South Korea (2013)	0.3	80.8	0.004

Source: Statistics Korea. Agricultural Investigation and Agricultural Census (1990, 2000, 2007, 2013), EU Farm Structure Survey (2007), and USDA Agricultural Resource Management Survey (2011).

Urban to Rural Migrant Farmers

As the baby boomer generation retired from work and the number of the unemployed in the cities increased in the late 2000s, the number of people who are migrating from urban to rural area has been on the increase. This is the second bout of the urban-to-rural migration since the late 1990s when people came back to rural areas in droves due to the job loss during the 1997 monetary crisis. According to the survey conducted by the Ministry of Agriculture, Food and Rural Affairs, the number of families who migrated from urban to rural areas for farming in 2013 was 10,023, a ten-fold increase from 880 in 2001. The number soared before and after the global financial crisis in 2008.

The composition of the urban-to-rural migrant farmers shows that people in their 50s account for 34.0%, those in their 40s (26.8%) are next, followed by those in their 60s (22%) and 30s (17.2%). People in the 40s accounted for most prior to 2008, but after 2009, those in their 50s are the biggest group. This is because the decrease in employees in the cities due to the economic crisis pushed those in their 30s and 40s to take up farming in early and mid-2000s, while an increasing number of the retiring baby boomers are going back to farms recently, increasing the number of people in their 50s taking up farming.

As more and more people are migrating from urban to rural areas for farming, a greater number of farming labor enter into the agricultural industry, but the aging of the farming population is expected to continue in the future. According to surveys by Chae Gwangseok and Park Seokdu in 2012, 76.4% of the farmers wanted to retire from farming when they are more than 70 years old, expecting their retirement age to be 74.4 years old.

Table 2-9 Current Status of Urban-rural Migrants for Farming by Householders' Age (2001-2013)

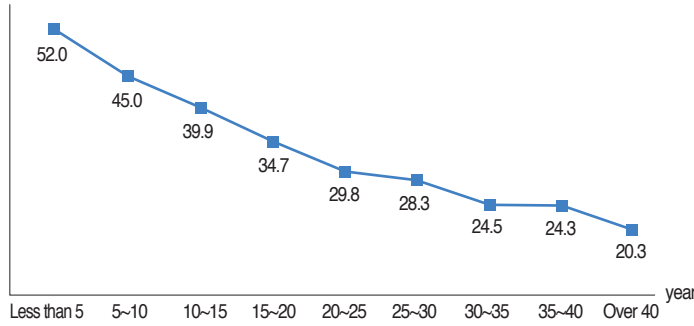
Unit: household

Year		Under 40	40-49	50-59	60 or older	Total
2001		354	293	187	46	880
2002		320	238	149	62	769
2003		303	260	201	121	885
2004		277	402	423	200	1,302
2005		341	393	319	187	1,240
2006		385	565	481	323	1,754
2007		430	766	706	482	2,384
2008		359	699	632	528	2,218
2009		1,870	1,294	749	167	4,080
2010		761	1,481	1,854	1,309	5,405
2011		1,202	2,555	3,764	2,554	10,075
2012		1,292	2,766	4,298	2,864	11,220
2013		1,253	2,510	4,289	2,871	10,923
Sum		9,147 (17.2%)	14,222 (26.8%)	18,052 (34.0%)	11,714 (22.0%)	53,135 (100.0%)
Annual average	2001-08	346.1 (24.2%)	452.0 (31.6%)	387.3 (27.1%)	243.6 (17.0%)	1,429.0 (100.0%)
	2009-13	1,275.6 (15.3%)	2,121.2 (25.4%)	2,990.8 (35.9%)	1,953.0 (23.4%)	8,340.6 (100.0%)

Source: Ministry of Agriculture, Food and Rural Affairs. Statistics on the Urban-rural Migrants for Farming in each year.

This is 10 years more than the average age of the farmers, and is not different from the average life expectancy. This shows that most of the farmers are inclined to work as long as possible if they are physically able to do. While aged farmers' retirement delays, the age of new entrants has been also increased. While the age of entry to farming for those with more than 40 years' experience in farming is 20.3, the entry age for those with 20-25 years' experience in farming is 29.8, for those with 10-15 years' experience in farming, 39.9, and for those with less than 5 years' experience in farming is 52. This trend of increase in the age of the new entrants in farming is expected to continue.

Figure 2-2 Entry Age by Agricultural Experience



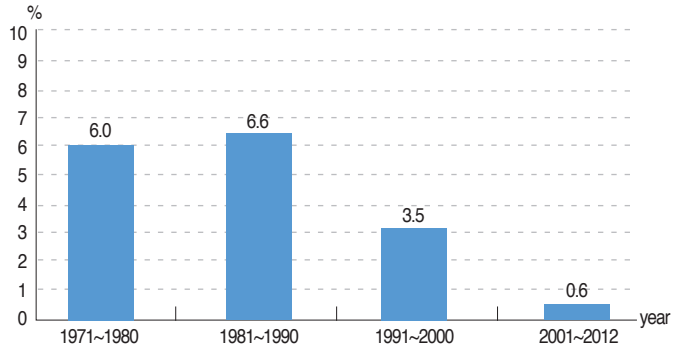
Source: Chae Gwangseok and Park Seokdu, *Current Status of Farmland Inheritance and Policy Tasks,* 2012.

Policies to Secure New Farmers

The aging of the farm households not only decreases agricultural productivity, but also fundamentally weakens the family structure of a farm household, a major entity in agricultural management, thereby ultimately undermining the sustainability of agricultural management. The trend of growth in Korea's real agricultural labor productivity reveals that the labor productivity increased by 6.0% every year in the 1970s and it peaked in the 1980s with 6.6%. However, it dropped to 3.5% in the 1990s and has been stagnant with a growth rate of 0.6% since the 2000s.

In order to respond to the shortage of agricultural human resources and the farm household aging, and to enhance agricultural competitiveness, the Korean government has introduced related policies since the 1980s. The following section will introduce the Farm Successor Fostering Program, the Korea National College of Agriculture and Fisheries, and the Comprehensive Plan to Foster

Figure 2-3 Annual Average Growth Rate of Agricultural Labor Productivity (1971-2012)



Source: Statistics Korea. Farm Household Economy Survey. Each year.

Elite Farmers, which are praised as the most successful policies of the kind.

Farm Successor Fostering Program

The program to foster farm successors is one of the long-lasting agricultural policies in Korea. The need for a policy to foster agricultural successors was raised as following phenomena became intensified in the 1970s and 1980s: the greying of farmers; the agricultural labor shortage; increase in agricultural wage; and falling labor quality and shortage of agricultural labor due to the reluctance of the youth in rural areas to engage in farming and the flight of the youth from the agricultural industry. The government, therefore, announced the farm successors fostering plan in 1980, and later raised funds for farming successor fostering programs by selling the property accumulated through power by illicit fortune amassers, and started the fostering program from 1981. The program was implemented for the purpose of securing 1 or more farming

successors per village. As many as 10,000 farming successors were selected a year as the plan to improve the structure of rural and fishing villages was introduced in the 1990s, but the number was reduced to 1,000-1,500 since the 2000s.

The target group for this program was those under 30 years old at first, but the age limit has been increased to 35, 40, and 45 gradually, as the number of young farmers decreased. The limit for age has been raised to 50 in order to include those increasingly returning to farming since the 2008 economic crisis. Instead, restriction on years of farming experience (less than 10 years) is put and conditions such as graduation from schools specialized in agriculture or the number of completed modules are created. Once selected as a farming successor, he/she can take out loans up to 200 million won with low interest rates for the new farm installation. Those already selected as farm successors some time ago can receive additional policy funds from the government. A total of 131,000 farm successors received benefits between 1981 and 2010. The number exceeds 10% of the total farm households, meaning that more than three people per village (administrative *ri*) were fostered as farm successors through the program. According to the evaluation of the farm successor fostering program (Ma Sangjin et al., 2010), more than 90% of the total recipients of this program remain engaged in farming and their income and farming scale is bigger than that of other farmers. And this program is proved to have enhanced the regional agricultural productivity, and to have improved the farming structure of farm households at the national level.

Table 2-10 Current Status of Fosterage of Farming Successors

Unit: person

Year	Commodity								Total
	Rice	Combined agriculture	Horticulture	Fruit	Special crops	Korean native cattle	Dairy	Other livestock	
1981	73	-	213	29	34	1,369	20	57	1,795
1982	473	-	347	67	92	685	116	66	1,846
1983	505	182	215	17	50	623	164	51	1,807
1984	1,130	1,132	257	20	101	1,376	424	40	4,480
1985	1,921	2,929	561	73	223	2,250	991	73	9,021
1986	2,532	3,756	653	90	286	1,036	561	149	9,063
1987	3,227	2,640	403	219	186	439	392	178	7,684
1988	1,677	1,118	176	236	57	136	145	55	3,600
1989	794	461	85	151	32	152	110	65	1,850
1990	634	623	139	99	54	174	74	53	1,850
1991	186	341	179	88	113	245	79	119	1,350
1992	1,373	1,098	1,430	525	409	2,590	713	862	9,000
1993	1,195	1,074	1,438	464	342	2,932	745	810	9,000
1994	450	833	1,606	501	417	3,067	685	781	8,340
1995	490	823	1,921	657	484	3,890	718	747	9,730
1996	473	750	1,466	545	385	3,428	466	714	8,227
1997	784	831	1,398	468	379	3,603	475	588	8,526
1998	1,481	1,049	1,360	547	364	2,193	337	531	7,862
1999	1,140	787	858	408	336	872	155	263	4,819
2000	1,326	797	813	376	303	687	124	248	4,674
2001	955	617	564	209	194	422	99	210	3,270
2002	699	380	400	169	116	404	134	198	2,500
2003	434	314	284	122	108	376	89	183	1,910
2004	202	117	202	91	84	305	37	87	1,125
2005	159	148	141	54	68	334	32	114	1,050
2006	171	156	174	78	74	216	51	124	1,044
2007	177	150	176	61	67	242	52	109	1,034
2008	340	218	296	123	123	386	63	156	1,705
2009	317	230	236	103	101	250	50	151	1,438
2010	284	168	355	147	115	250	52	159	1,559
Total	25,602	23,722	18,346	6,737	5,697	34,932	8,153	7,941	131,159

Source: Ministry of Agriculture, Food and Rural Affairs. Yearly Statistics on Agriculture, Forestry, Fishery and Food.

Korea National College of Agriculture and Fisheries

As the agricultural market opened up due to the Uruguay Round negotiation in the late 1980s and the early 1990s, the need to secure international-level competitiveness in agriculture came to the fore. To respond to upcoming changes in the market, the Korea National College of Agriculture and Fisheries (KNCAF) was established as an alternative for human resource policies. The government prepared the establishing of a professional school specialized in agriculture under the Rural Development Administration from 1995, and opened the KNCAF in March 1997, with a capacity of 720 students, 40 each in six departments (food crops, special crops, vegetables, fruits, floriculture, and livestock), and course duration of three years. Selection targets were those who graduated from high schools, with a recommendation from the principal of the school, or the head of an agricultural advisory center, or the mayor or county governor, or the head of an autonomous region, and students were selected through three steps including document examination, basic competency reviews, and interviews. The school has a special system called "2 plus 1," meaning 2 years in school and 1 year in farms. In their first year, the students receive basic education for agriculture in the school, and in the second year, they go out of school and have field education in the farms in and out of Korea. In the final year, they come back to school to design their own farm management plans.

The KNCAF is a school operated by the agricultural administration authorities, but graduates of the KNCAF are recognized equally as the Associates of Arts. Admission fees and tuition are exempted and other expenses for education are

supported by the government. Persons who have not yet completed their military duties can work in the manufacturing and production sector as the Skilled Industrial Personnel. In addition, every graduate of the KNCAF is selected as a farming successor and able to receive subsidies for new farm installation. Instead, the graduates are required to engage in farming for six years, which is double the schooling period. As of 2014, 3,312 students graduated since the first graduates came out in 2001.

Table 2-11 Current Status of Graduates of Korea National College of Agriculture and Fisheries by Graduation Year and Major

Unit: person

Graduation year	Food crops	Medicinal & Industrial crops	Vegetable	Fruit	Floriculture	Livestock	Total
2000	30(1)	41(0)	31(1)	32(1)	42(7)	33(1)	209(11)
2001	22(0)	43(3)	31(2)	36(4)	44(4)	32(0)	208(13)
2002	36(2)	44(7)	36(5)	35(1)	39(7)	33(0)	223(22)
2003	39(1)	33(2)	33(4)	35(1)	39(9)	38(3)	217(20)
2004	32(1)	29(1)	25(2)	30(1)	32(8)	39(0)	187(13)
2005	33(2)	34(5)	31(0)	31(0)	33(5)	45(4)	207(16)
2006	25(1)	34(4)	30(2)	23(3)	28(5)	53(4)	193(19)
2007	19(1)	36(5)	23(1)	28(1)	30(8)	57(2)	193(18)
2008	39(1)	36(8)	18(3)	28(1)	35(13)	58(4)	220(30)
2009	31(0)	33(5)	32(5)	32(4)	37(9)	58(5)	223(28)
2010	29(3)	34(9)	26(7)	35(3)	36(11)	51(7)	211(40)
2011	36(4)	52(11)	39(7)	37(3)	37(8)	75(5)	276(38)
2012	27(3)	34(8)	37(6)	20(1)	32(8)	59(5)	209(31)
2013	25(5)	52(15)	34(9)	31(5)	32(9)	60(6)	234(49)
2014	38(7)	60(14)	32(4)	41(4)	46(12)	85(7)	302(48)
Total	461(32)	595(97)	458(58)	474(33)	542(123)	388(18)	3,312(396)

Number in the rounded bracket is the number of female graduates.
Source: Korea National College of Agriculture and Fisheries. Analysis of the Graduates' Farming Status. 2014.

Table 2-12 Income of Farmers from KNCAF, Other Farmers, and Urban Workers by Year

Unit: 10,000 won

	2007	2008	2009	2010	2011	2012	2013
Farmers who graduated from KNCAF (A)	7,085	7,392	7,447	6,516	6,620	6,115	6,814
Other farmers (B)	3,197	3,052	3,081	3,212	3,015	3,130	3,452
(A/B)	(2.22)	(2.42)	(2.42)	(2.03)	(2.20)	(1.95)	(1.97)
Urban workers (C)	4,387	4,680	4,623	4,809	5,098	5,391	5,527
(A/C)	(1.62)	(1.58)	(1.60)	(1.35)	(1.30)	(1.13)	(1.23)

Source: Korea National College of Agriculture and Fisheries. Analysis of Income of the Graduates. 2014.

Out of all graduates, more than 95% work at farms for six mandatory years. After that, the rate slightly falls, but it remains at 86.3%, which is still a significantly high level. Income of the graduates (40% of the graduates operate their farm independently) is double the income of other farmers, and is higher than that of urban workers.

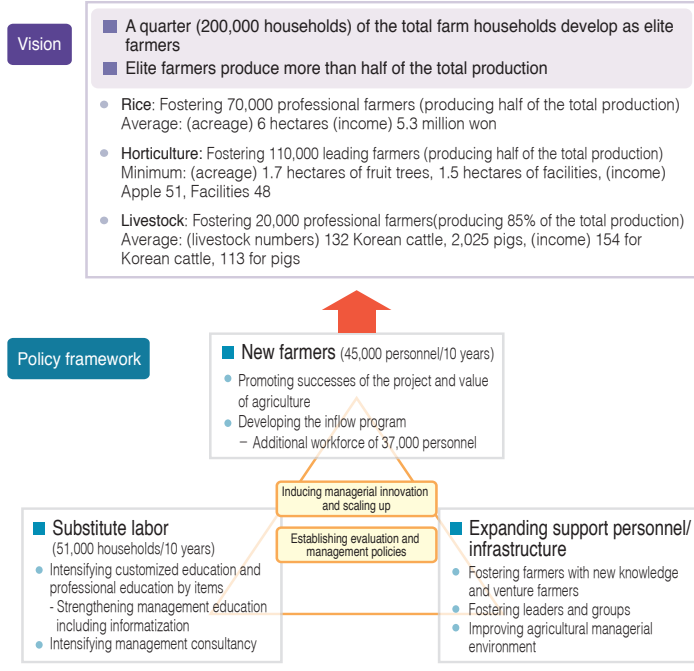
Comprehensive Plan to Foster Elite Farmers

The Korea-Chile Free Trade Agreement in 2004 was the first FTA in Korean history, which meant that agriculture market would be totally open to the world since. The Korean government developed a new master plan for agriculture and rural areas to cope with the change. As a part of the plan, a comprehensive plan for agricultural workforce development to secure human resources and to enhance their competitiveness was set up. With a goal of fostering 200,000 elite farm households (70,000 for rice production, 110,000 for horticulture, and 20,000 for livestock) for ten years, thereby supplying 50% of the total agricultural production stably, the

Comprehensive Plan to Foster Elite Farmers between 2004 and 2013 was pushed forward.

The plan was composed of a number of sub-projects such as: ① attracting young generation and fostering new farmers, ② creating a system to support for successful settlement, ③ establishing a customized education system, ④ providing consultancy to improve agricultural management and crisis management, and ⑤ evaluating the project to foster elite farmers and creating a follow-up management system. A total of 2 trillion and 427.8 billion won was to be invested in these projects for ten

Figure 2-4 Vision and Framework of the Comprehensive Plan to Foster Elite Farmers



Source: Ministry of Agriculture and Forestry. Comprehensive Plan to Foster Elite Farmers. 2004.

years from 2004 to 2013. This master plan was the first systematic support system for agricultural human resources, providing support according to development stages from the preliminary stage to the entry and the development stage.

Under the long-term plan that would last for ten years, a variety of projects and support systems were introduced: the project to support on-site farming education for agricultural high schools and agricultural colleges; the Workplace Learning (WPL) Project aimed at intensifying practical education for farmers; the project to build Agriculture Meister Colleges to systematically nurture leading farmers through 2-year education; the project to establish and operate a support organization (EPIS: the Korea Agency of Education, Promotion and Information Service in Food, Agriculture, Forestry and Fisheries) responsible for the agricultural human resources fostering plans. These projects were prepared not only to secure new farmers, but also to enhance competitiveness of existing farmers. Expertise on the non-agricultural sectors was shared and various types of competencies of private actors were injected into these plans. As a result, different types of human resources including returning farmers flew into the agricultural sector. In addition, an online and offline educational support system was put in place to help anyone who is interested in agriculture receive necessary education. In particular, content of agricultural education has been upgraded through regular quality control by the organization in charge, and the foundation for systematic networking between public and private institutes fostering agricultural human resources has been laid.

3. Farm Household Economy

This section will examine the current status of farm household economy since 2000 by looking at changes in the major indicators of agricultural economy such as income, farm operating expenses, consumption/spending, and debts. Key issues in the Korean agricultural economy will also be explained in this section.

As of 2014, the average cultivation acreage is 1.51 hectares, which is very small, the average family size of a farm household is 2.5 people, and 1.85 persons engage in farming on average, showing a family-based farming structure in the Korean agricultural society. Farm household income is 34.95 million won on average, and agricultural income accounts for 29.5% (10.3 million won) of the total farm household income.

The farm household economy in Korea has changed according to conditions of agriculture and rural communities. Increasing food production and agricultural income was the first priority in the agricultural policies in the 1970s, resulting in growing importance of non-agricultural income and the appearance of farmers with a side job. In the 1980s, as Korean agriculture evolved into the commercial agriculture, policies to improve agricultural operation were implemented based on performance analysis by agricultural items and operation as a whole. Farming association corporations and agricultural corporations were established in the 1990s when farm operating entities were diversified, and in the 2000s, new types of agricultural operating bodies including agribusiness corporations appeared in response to scaling-up of farming.

As Korea's agricultural market was opened following FTAs with

a variety of countries including major economies such as the U.S., EU, and China, risk factors in the farming market have been growing since 2010. In response, the direct payment program for farm household income and the agricultural disaster insurance system have been implemented. However, discussion on stabilization of both farm household income and agricultural operation has taken place due to the growing income gap between rural and urban areas, and among farm households, and increasing risks in agricultural operation.

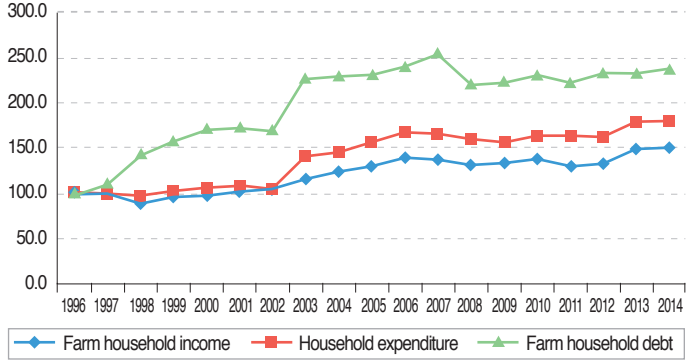
Downward Trend of Major Agricultural Economic Indicators: Farm Household Income, Debt and Expenditure

Nominal farm household income continued to increase since 1998, and recovered to the level of pre-financial crisis in 2001. It rose up to 32.3 million won in 2006 and to 34.95 million won in 2014. Meanwhile, farm household debt increased more rapidly than farm household income, but it remained stagnant recently due to aging population in the rural areas and lowered expectation on agricultural earnings. Farm household expenditure shows a similar trend to the farm household debt, being stagnant after a surge in the expenditure.

A closer look at the agricultural economic indices shows that the nominal farm household income rose by 2.4% on yearly average between 2003 and 2014, while the farm household debt increased by 0.4% over the same period, showing a stagnant trend. Meanwhile, the farm household expenditure increased by 2.1%, resulting in greater increase rates for income than the increase rates for debt

and expenditure, thereby improving major agricultural economic indices to a certain degree. However, better indices are not attained through increased profitability of agricultural economic activities, but attained through greater government subsidies and transfer income including capital transfer.

Figure 2-5 Trends of Major Agricultural Economic Indicators (1996=100)



Source: Statistics Korea, Annual Survey of Farm Household Economy.

Decrease in Agricultural and Non-agricultural Income and Increase in Transfer Income

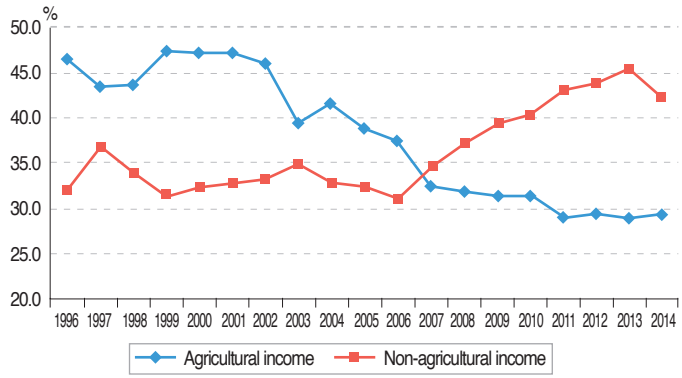
Farm household income dropped to 30.81 million won in 2009 from 32.3 million won in 2006, and picked up recently to 34.95 million won thanks to the recently improved terms of trade for farm households which were deteriorated until 2009.

A close look at changes in shares of each source for farm household income demonstrates that the share of agricultural income, which was over 50% in the early 1990s, plummeted to 31.5% in 2009. In particular, the year-on-year absolute scale of agricultural

income was reduced in 2011. Non-agricultural income continued to grow since the 1990s, but temporarily decreased due to the 1997 foreign exchange crisis, and recovered from 1999. Recently, together with increased transfer income, non-agricultural income has edged up, improving the stagnancy in overall agricultural income.

The share of transfer income was a mere 9% in 2003, but it continuously increased to account for 19.5% in the total farm household income in 2014, thanks mainly to the increased public assistance followed by the introduction of the direct payment system for rice income in 2005. The public subsidies took up 5.2% of farm income in 2003, but have continued to grow owing to full-scale implementation of the direct payment system for rice income. For income of small-scale farm households, the proportion of social-security type public assistance such as pension for farmers and fishermen and supplementary living allowances is greater than public subsidies for agricultural operation, while large-scale farm households benefit more from subsidies for agricultural operation than other public assistance.

Figure 2-6 Changes in the Share of Agricultural and Non-agricultural Income (1996-2014)



Source: Statistics Korea, Annual Survey of Farm Household Economy.

The share of non-business income such as income from employment at other businesses or day-to-day labor is greater than self-employed income in the total non-agricultural income. The share of non-business income accounts for 31.6% in the total farm household income in 2014.

The share of non-agricultural income has been growing, contributing to stabilization of agricultural income. However, the non-agricultural income share is still lower than that of other countries. Importance of increased non-agricultural income has been reiterated as there are a number of limitations for agricultural income growth: falling prices of agricultural products due to growing imports of foreign produce; and growing farm expenses including a price hike in oil and agricultural materials and increasing burden for interest payable. As a part of policy planning for achieving stabilization and expansion of farm household income, efforts have been made to reappraise the existing policies for boosting non-agricultural income and to develop new income sources. The 6th industrialization of agriculture, actively carried out recently, is also a part of this initiative.

Deterioration of Terms of Trade for Farm Households

Insecurity for farm households' operation has been growing due to accelerated opening of the Korean agricultural market and weak competitiveness of farm households. An excessive supply of produce due to the inflow of foreign produce since the mid-1990s dragged the prices of farm products down, and the domestic agricultural growth has been stagnant since then. As a result, the terms of trade for farm households have deteriorated, and agricultural value-added has been stagnant.

Nominal agricultural value-added, which surpassed 25 trillion won in 2000, dropped to a certain degree in 2008, but it increased continuously to reach 30.6 trillion won in 2013. However, real agricultural value-added was on the decrease. It dropped by 8.8% from 2000 to 29.5 trillion won in 2013. The share of value-added in the production value had continuously decreased by 6.5 percentage points to 65.5% in 2013 from 72% in 2005.

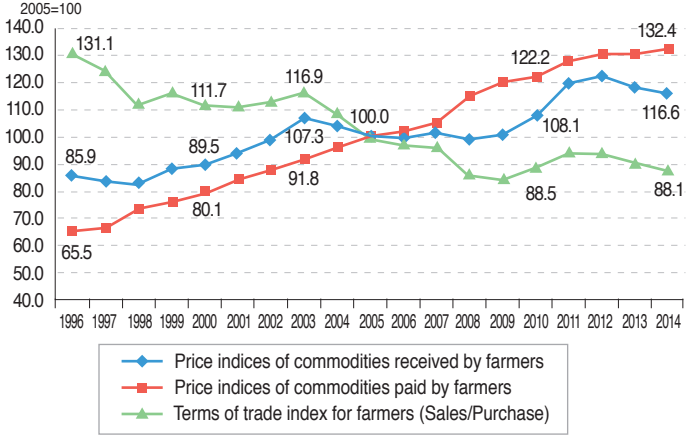
The decrease in agricultural value-added was caused by faster growth of intermediate input than growth of agricultural production. The recent hike in raw materials is among many factors that pushed up the prices of agricultural inputs. A closer look at the changes in terms of trade for farm households (2005=100) shows that the price indices of commodities received by farmers, which demonstrated downward trend since 2003, started to switch to show upward trend from 2009, although they are lower than the price indices of commodities paid by farmers, continuously dragging the terms of trade for farm households down from 116.9 in 2003 to 88.5 in 2010 and to 88.1 in 2014.

Real prices of agricultural produce turned around and fell from 1995 when farm produce was oversupplied due to increase in foreign produce and stagnation of domestic consumption. As a result, agricultural income also became stagnated. As farm product prices dropped due to expanded market opening, the agricultural production value increased, but the agricultural income did not, intensifying the “gap between growth and income” phenomenon.

Real gross farm receipts have been on the rise since 2000, but real farm expenses (farm operating costs) have soared, resulting in a limited increase in real farm income. Recently, livestock operating

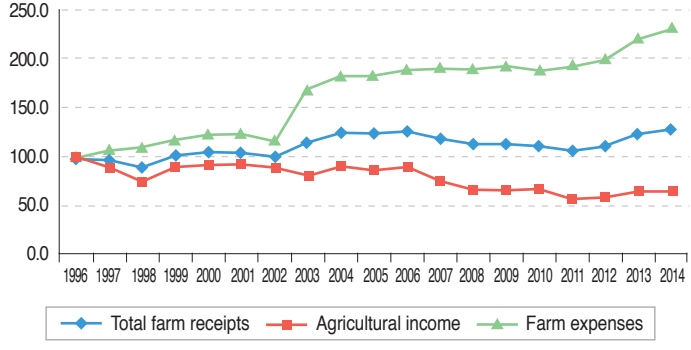
costs have risen due to a price hike in feed grains which are highly dependent on imports, and an increase in labor expenses and rents pushed the farm expenses up.

Figure 2-7 Changes in Terms of Trade for Farm Households



Source: Ministry of Agriculture, Annual Statistics for Food, Agriculture, Forestry and Fisheries.
Statistics Korea, Annual Survey of Farm Household Economy.

Figure 2-8 Changes in Real Agricultural Income, Farm Receipts and Farm Expenses (1996=100)

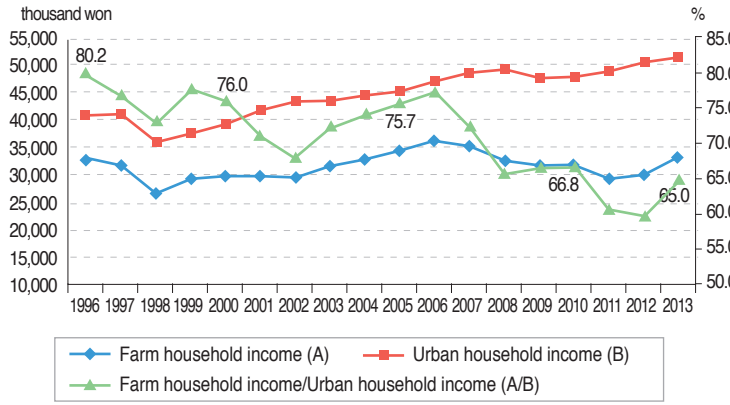


Source: Statistics Korea, Annual Survey of Farm Household Economy.

Income Gap between Urban and Farm Households

Farm household income was over 75% level of household income of urban workers up until the mid-1990s. However, the income disparity between urban households and farm households has been widening since 1995, and farm household income level has decreased to 76% of urban household income in 2000, 75.7% in 2005, and 65% in 2013. Population aging in rural areas and deteriorating terms of trade for farmers led to a continuous drop in agricultural profitability and agricultural income, while consistent economic growth in urban areas contributed to rising income of urban workers.

Figure 2-9 Trend of Income Gap between Urban and Agricultural Households (1996-2013)



Source: Statistics Korea, Annual Survey of Household Economy & Farm Household Economy.

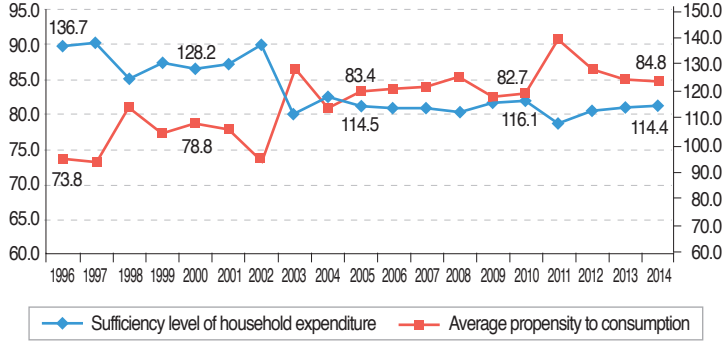
Current Status of Consumption Expenditure of Farm Households

A farm household, which is also a business unit, functions as both the producing entity and the consumption entity in the agricultural

economy. The sufficiency level of household expenditure (farm household income/household expenditure), which demonstrates how much expenditure a farm household bears from its income through farming, has been declining at a faster pace since 2003. The household expenditure sufficiency level continuously dropped from 136.7% in 1996 to 114.5% in 2005, to 114.4% in 2014. With an exception of 108% in 2011, the rate has inched up recently, but stays in stagnancy overall. Meanwhile, the average propensity to consumption of farm households (consumption expenditure/disposable income) showed an upward trend from 73.8% in 1996 to 83.4% in 2005 to 90.8% in 2011, but it has decreased continuously since 2012 to become 84.8% in 2014.

The average propensity to consumption of farm households varies depending on the income level of each farm household. The average propensity to consumption is higher for the low-income classes. For the high-income classes, the expenditure on food is low, while that on education is high.

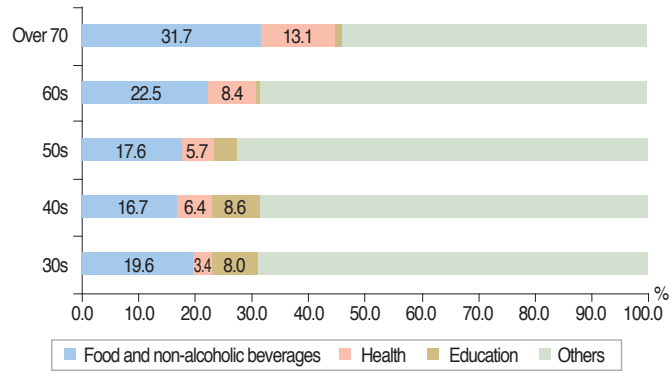
Figure 2-10 Trend of Farm Household Expenditure



Source: Statistics Korea, Annual Survey of Household Economy & Farm Household Economy.

The current status of farm household consumption expenditure by owners' age shows that the older the farm owners, the more expenditure on food and medical treatment, and younger farm owners in their 30s and 40s spend more on education, reflecting the cyclical characteristics of life-span.

Figure 2-11 Trend of Farm Household Expenditure by Owners' Age (2014)



Source: Statistics Korea, Annual Survey of Farm Household Economy, 2014.

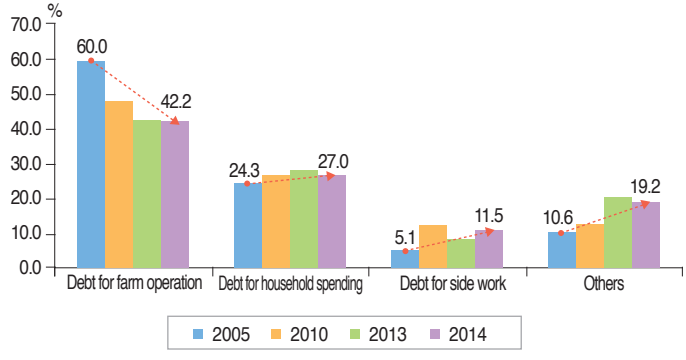
Decreasing Debt for Farm Operation and Increasing Debt for Non-farm Purposes

Farm household debt, which increased from 19.9 million won in 2000 to 27.2 million won in 2005 to 29.9 million won in 2007, decreased since 2009, but it rose again to 27.8 million won in 2014. To business entities, debt has the dual aspect: it is financial burden due to interest expenditure, while it is an asset that enables new investment. The farm household debt has been increasing slowly after its drop in 2008. However, it is due to farmers' avoidance of new investment as agricultural profitability fell and overall

agricultural income became stagnant, a phenomenon that needs to be thoroughly examined.

Farm household debt by usage below shows that debt for farm operation has continued to decrease from 2005, while debt for household spending has increased, reflecting the trend of avoiding new investment for agriculture. The share of debt for farm operation decreased from 60% in 2005 to 42.2% in 2014, while debt for household spending increased from 24.3% to 27% over the same period. In other words, overall farm household debt is increasing due to rising debt for non-agriculture and consumption rather than an increase in debt for agricultural investment.

Figure 2-12 Changes in Composition of Farm Household Debt



Source: Statistics Korea, Annual Survey of Farm Household Economy.

According to an analysis of composition of debt by farm size for 2014, households with a small-scale farm (less than 1 hectare) have more debts for household spending than debt for farm operation. On the other hand, households with a large-scale farm have more debt for farm operation than debt for other usages. The higher debt

ratio for household spending for households with a small-scale farm means shortages in household spending caused by deteriorated farm income are complemented by farm household debt. In other words, the financial structure for farm households is highly likely to worsen if this trend continues.

Outlook and Challenges

Recently, agricultural income has been decreasing due to falling profitability followed by deteriorated terms of trade for agriculture. Farm household debt and household spending have been stagnant, worsening the agricultural economy. The terms of trade for farm households are expected to deteriorate as the tariff rates are likely to fall following a series of FTAs with major economies such as the U.S., EU, China, etc.

Meanwhile, increasing heterogeneity in farm size, farmers' age, etc. is widening disparity of income and farming skills among farm households. In particular, the share of specialized and large-scale farms is increasing and the share of agricultural output produced by professional farmers is rising. Therefore, the focus of agricultural policies in Korea needs to be shifted towards enhancing efficiency and performance of farming. In other words, for farm households with a small-scale farm, welfare policies to expand health and medical services and to improve living conditions are to be prepared, while agricultural management policies for risk management and expansion of funds should be implemented for specialized and professional farm households.

The share of debt for household spending has recently become greater than that of debt for farm operation, deteriorating the

financial structure of farm households. Farm household debt can be a source of instability for the farm household economy, but it can also function as the foundation for growth, if it is used as investment for higher profitability of farm products. This is why the recent trend of rising debt for household consumption compared to debt for agricultural production is a source of major concern. However, as there are consistent demands from large-scale farms for funds to invest in agriculture, the relevant government authorities should make efforts to supply funds to the agricultural sector, in a way of providing capital, not debt, instead of trying to reduce the farm household debt itself. Currently, financial support is made mainly through providing security for loans; thereby the investment in agriculture is also translated into the increased farm household debt. Funding methods should also be diversified from loan-based investment to include a direct financial market method, namely, profitability-based investment, in order to expand supply of funds needed in the agricultural sector.

In order to increase farm household income, a variety of policy measures are to be prepared: a measure to encourage farms to engage in high quality and value-added agriculture such as environmentally friendly and organic farming; a measure to create income through the 6th industrialization; and a measure to create a new market through expanding export markets. On the other hand, many factors such as greater price instability of agricultural products following the inflow of foreign produce, a hike in farm expenses due to rising labor costs, rent, and agricultural materials, and an ensuing drop in income rates now adversely affect agricultural income, thus heightening the need to prepare policy supports to increase non-

agricultural and transfer income. In addition, plans must be prepared to stabilize agricultural income by expanding income support for multifunctionality and sustainable farming and by establishing laws for systematic management of farm operating risks.

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- Statistics Korea. Annual Survey of Farm Household Economy. each year.

4. Agricultural Cooperatives

Korea's agricultural cooperatives are comprised of regional agricultural cooperatives and commodity specialized agricultural cooperatives as primary cooperatives. Also, all primary cooperatives compose the National Agricultural Cooperative Federation (NACF). In addition to primary cooperatives, the NACF also performs the banking and insurance business and the supply and marketing business. However, the NACF operates two separate holding companies for the former and the latter businesses. The revenue gained from the NACF's banking and insurance business enabled Korean agricultural cooperatives to develop greatly by fostering primary cooperatives. The greatest achievement of Korea's agricultural cooperatives was that they helped Korean rural villages overcome their underdeveloped status by resolving the high interest problem in rural areas in the 1960s and stably supplying modernized inputs such as fertilizers.

The special structure of Korea's agricultural cooperatives was useful in the economic development process in the underdeveloped stage, but in an era of market liberalization, there has been more demand for strengthening the roles of sales businesses than supplying funds and inputs. Member farms require the strengthening of marketing businesses, but agricultural cooperatives were criticized that they concentrated on the banking and insurance business bringing high profits. In order to address this issue, the reform of agricultural cooperatives is being pursued by promoting the scaling up of primary cooperatives and strengthening the functions of the marketing business. In particular, the separation of the NACF's

banking and insurance business and the supply and marketing business has been pursued since 2012.

Overview

Organizational Structure

In Korea, not only primary cooperatives but also their federation conduct both the supply and marketing business and the banking and insurance business. Korean agricultural cooperatives are unique in the world in that the NACF performs such multiple functions. Recently, however, the reform of the NACF has been pursued. In Japan, primary cooperatives serve multiple functions, but at the federation level, the banking and insurance business federation, the supply and marketing business federation, and the central association are separated.

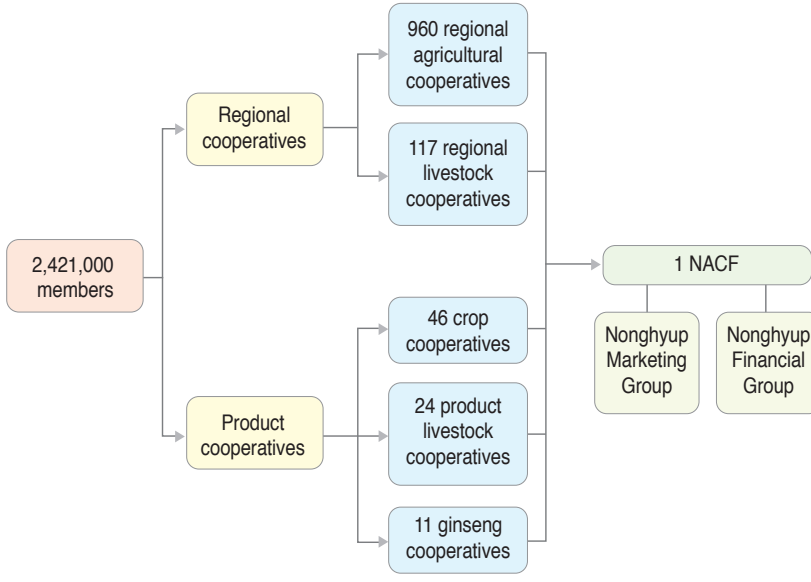
The establishment of agricultural cooperatives is regulated by the Agricultural Cooperatives Act. Primary cooperatives must receive government approval to be certified as an agricultural cooperative. Farms form a farming association, which is an agricultural production and marketing organization, but in this case, it cannot be named an agricultural cooperative.

Korea's primary cooperatives are categorized into regional agricultural cooperatives and product cooperatives specialized in specific products. Regional agricultural cooperatives are again divided into regional crop farming cooperatives and regional livestock cooperatives. As seen in Figure 2-13, Korea's agricultural cooperative system is mainly formed by regional agricultural cooperatives, because the number of product cooperatives is significantly smaller. Farms can join regional agricultural

cooperatives and product cooperatives simultaneously. There is also a multiple membership program in which a household member involved in farming can be a member of the same cooperative with another member in the household.

Regional cooperatives are organized with an administrative district as a unit to avoid overlapping. In other words, a farm household cannot become a member of a regional cooperative outside its residential area. Also, every farmer has the right to become a member of a regional agricultural cooperative. Some cooperatives are larger than others, responsible for multiple administrative districts, while smaller organizations may be in charge of only a single district.

Figure 2-13 Structure of Korea's Agricultural Cooperatives (2014)



Product cooperatives are cooperatives that provide memberships only for farms related to specific products. Only specialized farms that exceed a certain scale can become members. Unlike regional agricultural cooperatives, these product cooperatives are allowed to determine their area autonomously according to the articles of association. Product cooperatives are in charge of larger areas than regional agricultural cooperatives. Product cooperatives also perform the banking business called mutual finance.

As of 2014, the total membership of Korean agricultural cooperatives is 2,421,000 people, and among primary cooperatives, regional agricultural cooperatives take up the largest number (960), followed by 117 regional livestock cooperatives. Product cooperatives are comprised of 46 crop cooperatives, 24 livestock cooperatives of specific livestock, and 11 ginseng cooperatives. The total number of primary cooperatives is 1,158. Primary cooperatives continuously merged together and their number dropped from 1,277 in 2006 to 1,181 in 2009. These primary cooperatives make up the NACF, and the NACF possesses Nonghyup Marketing Group Inc. in charge of the supply and marketing business, and Nonghyup Financial Group Inc. in charge of the financial business.

Business Structure

Korea's primary cooperatives imitate the Raiffeisen agricultural cooperative, a comprehensive agricultural cooperative in which all businesses related to the economic and social activities of member farms are carried out. Korean agricultural cooperatives cover many businesses such as banking and insurance, mutual aid, marketing, processing, retail, purchases of farm materials, and training and

education. The only difference between regional agricultural cooperatives and product cooperatives is the items that they deal with. They carry out similar types of businesses, so there are many cases that primary cooperatives compete against each other in the same area.

Figure 2-14 Percentage of Primary Agricultural Cooperatives' Gross Margin by Business (2014)

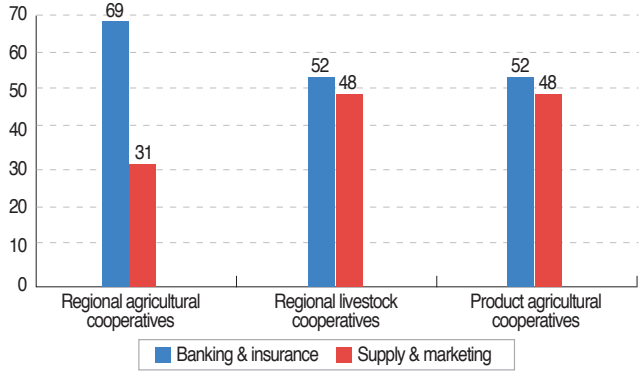


Figure 2-15 Agricultural Cooperatives' Places of Business

Depending on types, primary cooperatives have differences in the proportion of each business sector in gross margins. In the case of regional agricultural cooperatives, the banking business (mutual finance) accounts for 69%, while the supply and marketing business that includes sales, purchasing, retail, and processing takes up only 31%. That is, regional agricultural cooperatives focus more on the banking business than the supply and marketing business. On the other hand, in the case of regional livestock cooperatives, the banking business accounts for 52%, and the supply and marketing business accounts for 48%. In the case of product agricultural cooperatives, the banking business accounts for 52%, and the supply and marketing business amounts to 48%, a relatively high proportion. Regional agricultural cooperatives were allowed to provide banking services in 1972, whereas product agricultural cooperatives were granted the same right in 1989 to finance their weak supply and marketing business. The proportion of the banking business is therefore low in product agricultural cooperatives.

Korea's primary cooperatives are making profits in the banking and insurance business and losses in the supply and marketing business. The business structure is pursuing supply and marketing businesses and education projects based on the profits from the banking and insurance business. This banking and insurance business is not mutual finance targeting only members, but also recognizes local residents who are non-members as quasi-members. As the banking and insurance business for non-members has been developed greatly, the proportion of the business of primary agricultural cooperatives has grown. Accordingly, by focusing more on the banking and insurance business that increases their revenue

rather than on expanding the supply and marketing business for members, primary cooperatives have been criticized that they have lost the characteristics of a cooperative.

Like primary cooperatives, the NACF also carries out banking, insurance, supply and marketing businesses. However, the NACF's banking business is different in that it targets non-members in cities just like commercial banks, not focusing on members. The experience gained by the NACF's banking business was applied to primary cooperatives' banking and insurance business, which enabled the development of products at low costs. Unlike other countries, the NACF's banking business has competitiveness and has developed primary cooperatives.

The NACF also conducts a support project to develop primary cooperatives based on its earnings from the banking and insurance business. This is the cooperative mutual support business. It established a cooperative mutual support fund to support the management of primary cooperatives based on the earnings from the banking and insurance business. Its scale is fairly large. Based on this fund, interest-free funds are provided to primary cooperatives in order to support the stabilization of management. There are criticisms that the NACF's fund support maintains inefficient businesses although it contributes to stabilizing the management of primary cooperatives.

Establishment and Development of Korea's Agricultural Cooperatives

The establishment process of Korea's cooperatives will provide a good example for the foundation of agricultural cooperatives for

rural development in developing countries. Since the formation of the government in 1948, the establishment of agricultural cooperatives was the most important task together with land reforms in agricultural policies. The government considered the role of agricultural cooperatives and the introduction of the owner farming system important in the development of agriculture and rural areas. In particular, the most urgent tasks were to expand supply of agricultural materials such as fertilizers and pesticides by providing funds insufficient in rural regions, and to solve the high interest problem in farming villages.

There were financial cooperatives in Korean rural regions, but the task was to convert them into agricultural cooperatives. However, a conflict arose between the Ministry of Agriculture and the Ministry of Finance over legislating the supervisory rights of the financial cooperatives, thus causing a delay in the establishment of agricultural cooperatives. The key issue was whether to separate the banking and insurance business and the supply and marketing business, or to operate them together. Then in 1956, the Agricultural Bank was established first because of insufficient funds in rural areas. In 1957, the federation was founded with the Agricultural Bank and the NACF that was in charge of the supply and marketing business separated. After that, village-level agricultural cooperatives began to be formed as basic agricultural cooperative units.

The agricultural cooperatives gradually expanded, but the banking and insurance business was excluded. Thus, it was difficult to procure funds, and cooperation with the Agricultural Bank was insufficient. Therefore, it became impossible to pursue the supply and marketing businesses due to lack of funds. In result, the initial

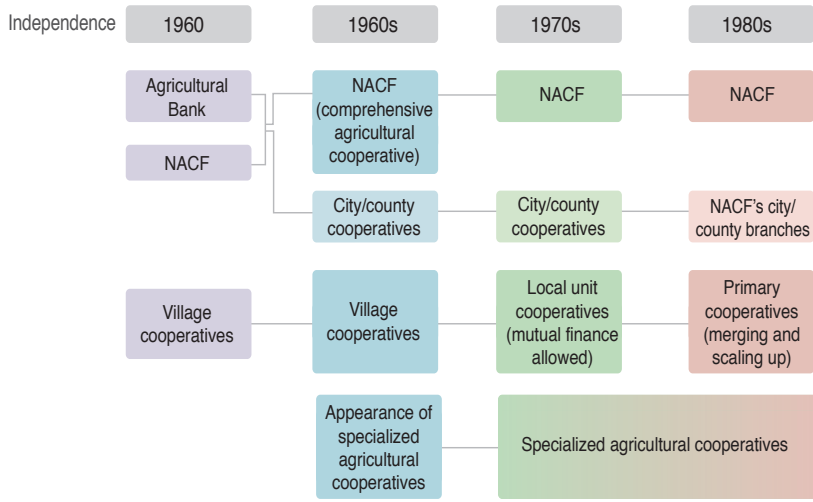
goal of developing agricultural cooperatives and boosting the rural economy by establishing an agricultural credit system was not achieved. There were claims that the separation between the Agricultural Bank and the NACF needed to be reviewed. In 1961, the military government enacted the new Agricultural Cooperatives Act that integrated the agricultural cooperative law and the agricultural bank law, and the NACF began to be in charge of both the banking and insurance business and the supply and marketing business. Thus, a three-stage system of the NACF, city and county cooperatives, and village cooperatives was formed.

Local village cooperatives, the basic unit of agricultural cooperatives, were too small to provide meaningful support for community development. Major tasks were being performed by city and county cooperatives. In order to scale up their size, village cooperatives began to be consolidated into *eup*- and *myeon*-level organizations that represented larger administrative districts. The plan, created in 1969, called for integrating all village cooperatives into larger units by 1973. As a result, the number of village cooperatives fell from 16,089 in 1968 to 1,545 in 1973.

With the scaling up of local unit cooperatives, the Mutual Finance Act was enacted in 1972 to approve their banking and insurance business, and they developed rapidly. Primary cooperatives were also allowed the banking and insurance business, and thus the comprehensive agricultural cooperative system was formed. Together with the rapid development of mutual finance, local agricultural cooperatives also grew rapidly, and the high interest problem of rural areas started to be resolved. In 1980, the city-county cooperatives were integrated into the city-county branches of the

NACF to improve the efficiency of Korea's agricultural cooperative organizations, and thus constructed a nation-wide network. In result, the system of agricultural cooperatives was converted into the two stages of 'unit cooperatives-NACF'. Meanwhile, due to the demands for democratization throughout society, the selection of the presidents of the cooperatives was converted from the indirect election system to the direct election system in 1987.

Figure 2-16 Changes in Structure of Korean Agricultural Cooperatives



Achievements and Tasks

Going through the colonial times, Korean agriculture was in an underdeveloped phase and rural areas were in absolute poverty. To break away from the least developed stage, a greater role of agricultural cooperatives was demanded. While agricultural

cooperatives in other countries only engage in the production and sales business, Korean agricultural cooperatives are more focused on providing credit for farmers and they are legally permitted to do the lending business.

As a result, Korean agricultural cooperatives were able to solve the issue of private loans with high interest rates, common in rural areas of least-developed countries. This is the greatest achievement of Korean agricultural cooperatives and often cited as a successful case in the world. The NACF seems to have mainly contributed to eliminating high-interest rate loans by showing its strong leadership, particularly in the mutual savings and loans services of primary cooperatives.

In the 1990s, however, trade liberalization in agriculture called for a new role of agricultural cooperatives. As the WTO urged governments to reduce their market intervention and the agricultural market became liberalized, agricultural cooperatives were strongly required to strengthen their marketing business which had not been stressed.

For this, reforms were pursued in agricultural cooperatives to separate the NACF's banking and insurance business and its supply and marketing business. This was because of criticisms that as it focused too much on the banking and insurance business targeting non-members, its supply and marketing business could not be expanded. Organizational changes are necessary for agricultural cooperatives to promote the supply and marketing business, but due to many interests to maintain the existing system, there have been conflicts over reforms and changes. Reforms of the agricultural cooperatives system are continuously needed in order to satisfy the

demands of member farms in response to the changes in conditions. In 2012, plans were made to establish two holding companies in order to separate the NACF's supply and marketing business and its financial business. Thus, the core task for reforms of Korea's agricultural cooperatives, which was to separate the NACF's banking and insurance business and its supply and marketing business, was resolved.

Major Tasks of Korea's Agricultural Cooperatives

Strengthening the Role of Nonghyup Marketing Group Inc.

Korea's agricultural cooperatives made great developments based on the banking and insurance business, but there have been demands that the NACF's marketing business should be strengthened because of the changes in conditions such as agricultural market opening. Thus the separation between the supply and marketing business and the financial business was pursued. However, as the supply and marketing business must procure business profitability, and therefore, a stage-by-stage establishment plan was selected for Nonghyup Marketing Group Inc. unlike Nonghyup Financial Group Inc. In other words, within three years since the enforcement of the Agricultural Cooperatives Act, sales and marketing businesses will be transferred to Nonghyup Marketing Group Inc., and from 2017, the NACF's all supply and marketing businesses will be transferred to the company. In this process, there were many criticisms that it would not be appropriate to separate the supply and marketing business, which is the original business of agricultural cooperatives, into a holding company. A holding company system was selected to

strengthen functions of the business through discussions.

It is necessary to provide an institutional device so that Nonghyup Marketing Group Inc. can sufficiently play its roles as a cooperative, although it is a corporation in which the NACF invested. In particular, it is needed to provide principles and legal devices so that there are no limitations of the fair trade law in providing support for the supply and marketing business of primary cooperatives. There are also demands that the roles of Nonghyup Marketing Group Inc. should be strengthened. Establishing the relationship between the company and the NACF is another task.

There are demands for a device to prevent the company from pursuing only its interests rather than primary cooperatives' interests. A supplementary device is required for the operation in accordance with its identity of the cooperative so that more benefits are provided if more primary cooperatives participate in the federation's projects. New tasks are being pursued such as forming governance of Nonghyup Marketing Group Inc. and establishing its organizational system.

Scaling Up Primary Cooperatives

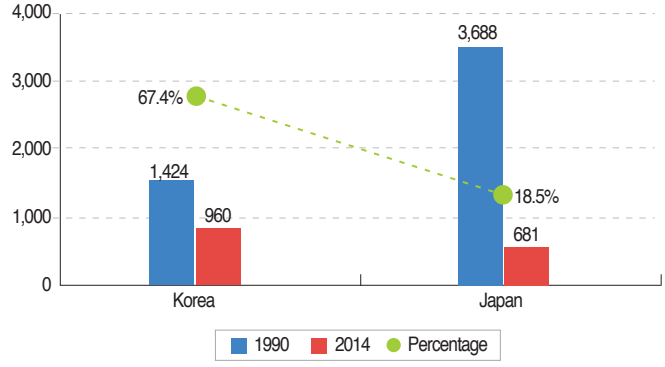
Another issue that the agricultural cooperative system in Korea faces is how to effectively merge primary cooperatives to scale up their size. The emergence of large discount stores in the agricultural product market and their increasing share in the retail market have reduced the bargaining power of farm households or agricultural cooperatives. The scale of producers' distribution and marketing must be increased to ensure a steady supply and higher bargaining power of farmers. In addition, the NACF needs to develop the

food processing industry and fresh food products to improve the value added of agricultural products. Heightened value added will cushion the impact of the decline in agricultural goods' prices due to free trade. For this, large investment in logistics and distribution networks in production areas is required. To respond to all these calls, a merger of primary cooperatives was suggested as a measure to scale them up.

In the early 1970s, primary cooperatives of small villages began to merge with each other at the *eup* (town) and *myeon* (township) level for their scaling up. After that, they could lay the foundation to become independent thanks to their growth based on mutual savings and loan services. During this era, as the basic administrative units were *eup* and *myeon* districts, *eup* and *myeon* level cooperatives could provide necessary services to their members.

However, the growth of primary cooperatives and rising labor and operating costs began to strain small local organizations to their limits. In addition, expansion of the farm products market across the country meant that local cooperatives could not effectively respond to the market. The evolution of online banking and the integration of the financial market also created the need for a nationwide banking operation. Regional cooperatives were required to increase capital and human resources to provide the services needed by members. However, primary cooperatives had trouble even meeting the basic supply needs of the market, and were losing their bargaining power in the market. Primary cooperatives' weak ability to respond to the market made them rely more on the NACF's support and that again led the NACF to depend on its banking business, forming a vicious cycle.

Figure 2-17 Progress in the Merger of Regional Agricultural Cooperatives



Meanwhile, the basic administrative unit was expanded from *eup*s and *myeon*s to cities and counties. In the early 1990s, there was an increasing call for integration of regional primary cooperatives into city and county units to secure a stable supply base, enhance bargaining power, and maintain sufficient investment capabilities. However, mergers of primary cooperatives were largely limited to combining two to four under-performing organizations rather than city- or county-wide expansion. Such mergers happened in only three places.

As a result of the integration of regional agricultural cooperatives, their number declined from 1,424 in 1990 to 960 in 2014. Japan also pursued mergers of regional agricultural cooperatives under the same conditions in the early 1990s. The scale of the country's integration of the cooperatives was much larger: their number fell from 3,688 in 1990 to 681 in 2014. Small *eup*- and *myeon*-level cooperatives still form the majority of regional agricultural cooperatives in Korea.

The task of Korea's agricultural cooperatives is to effectively

merge regional agricultural cooperatives, which are based on mutual finance, into cooperatives at the level of cities and counties, which are lower-level local governments. This is also necessary to promote the development of regional agriculture through the cooperation between local agricultural policies and agricultural cooperatives. Furthermore, there are demands for the integration of product cooperatives and regional agricultural cooperatives with similar business structures in the same region to prevent competition among the agricultural cooperatives. The purpose of such merger is to enhance capital procurement abilities through scaling up, to increase bargaining power through horizontal integration, and to secure the cooperatives' stable management.

Strengthening the Cooperative Identity of Primary Cooperatives

Due to the polarization between a small number of full-time farms and many small farms with the development of agriculture, agricultural cooperatives have had limitations in pursuing businesses that reflect members' interests. Particularly, Korea's agricultural cooperatives elect their presidents through membership elections, and the president is in charge of the management of the cooperative. Therefore, heterogeneity of members has a strong impact on the president's management strategies. Presidents make their decisions from the political standpoint focusing on many small farmers, and thus, they are unable to properly reflect the interests of full-time farms. In particular, retired farmers still maintain membership, having a great impact on elections of cooperatives, and this problem has become more severe.

In order to resolve the decision-making issue of cooperatives, identity should be strengthened so that members have a stronger sense of ownership and monitor the management of their cooperatives. For this, unqualified members should be removed and the structure that the manager is determined through cooperative president elections should be reformed. Cooperatives should be operated through discussions and communication for coordinating their members' various interests. Members with high interests regarding management of their cooperative should become executives, and the president of the cooperative elected through members' direct election should monitor the management of the cooperative as a chairperson of the board of directors, rather than being in charge of management. For this, it is necessary to reform the system of members' direct election of the cooperative president. Diversity must also be enhanced in the composition of the board of directors so that the board of directors can convey various interests. Likewise, reforming the governance of primary cooperatives will be a core task of agricultural cooperatives.

Another mission is to strengthen the profit distribution system centered on participants in the cooperatives' projects to enhance loyalty of members. In the case of agricultural cooperatives, increasing members' participation in their businesses is directly related to the development of the cooperatives, and strengthens the cooperatives' identity. Therefore, profit distribution focusing on members participating in the projects should be expanded. Another task is to scale up businesses by expanding joint businesses, cooperation among cooperatives, to improve the efficiency of businesses. This provides more profits to members participating

in the businesses. Individual agricultural cooperatives should seek systems to provide the most profits to member farms, rather than the profits of the cooperatives. For this, it is needed to improve the system that members elect their cooperative president.

Outlook

Korea's agricultural cooperatives have established and implemented plans to promote the agricultural product marketing business by 2017 according to cooperative members' demand. Primary cooperatives are being scaled up to strengthen production sites' marketing business, and cooperative joint business corporations, which are new agricultural cooperative marketing organizations, are being established. Simultaneously, constructing a basis for self-subsistence is pursued through the merger of primary cooperatives. They will be merged into about 500 primary cooperatives. Due to the farm structure that is polarized into large professional farms and small farms, primary cooperatives will also be reorganized into cooperative joint business corporations, subsidiaries, and product cooperatives mainly in charge of the supply and marketing business, and regional agricultural cooperatives in charge of the banking and insurance business in the long term.

The NACF aims at strengthening wholesale and retail businesses in consumption areas and expanding processing businesses to establish food companies. In particular, it aims to expand and launch retail shops like supercenters in order to increase sales channels for farms. By establishing a basis for self-subsistence of its supply and marketing business, the NACF aims at reducing the load of the

banking and insurance business. Accordingly, in 2017, the NACF's banking and insurance business and supply and marketing business will be separated, and independent holding companies will be established for each business.