

CHAPTER

# 01

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## Introduction

1. The Land and Population
2. The National Economy and Agriculture
3. Agricultural and Rural Budget
4. The Past and Present of Korea's Agricultural Policy

# Introduction

Korea is located on the Korean Peninsula in East Asia. It has a history of around five thousand years. In the early 20th century, the nation went through the colonial rule of Japan. After World War II, it was partitioned along the 38<sup>th</sup> parallel: the North was under the Soviet Union and the South under the U.S. occupation. Then, the Korean War broke out and the nation divided into North Korea (officially, the Democratic People's Republic of Korea) and South Korea (officially, the Republic of Korea). South Korea (afterward, Korea) was established in 1948 and observed its 75<sup>th</sup> Independence Day in 2020.

The Peninsula's position shows the characteristics of continental climates with seasonal winds blowing from the Asian continent and extensive seasonal differences in precipitation. In summer, it is hot and humid; in winter, it is cold and dry. Geographically, Korea is a small country with a lot of mountains.

As Korea is under the influence of Asia's monsoon climates-high temperatures and humidity in summer, rice farming has long been developed. Historically, it thought highly of agriculture as the foundation of national growth. However, it did not have plenty of arable lands, and farmers tried hard to maximize yields from available lands. While the nation was rapidly industrialized, many farmers left for cities. In the 21<sup>st</sup> century, as many changes happen in the rural landscape, the Korean government pursues various novel policies for agricultural restructuring to keep pace with international norms.

Before discussing the main topics of Korean agriculture, let me walk you through its geographic, economic, and demographic characteristics, as discussed in the sections below.

## 1. Land and Population

### Area and Topography

The Korean Peninsula is located at 33-43 degrees north latitude and 124-132 degrees east longitude. The Korean Peninsula, extending southward, is bordered by Aproz and Tuman rivers in the north, the East Sea in the east, the South Sea in the south, and the Yellow Sea in the west.

The total area of the Peninsula is 223,000 km<sup>2</sup>, with the South occupying 100,284 km<sup>2</sup> of the total. Farmlands take 17.1% of the total, forests 63.5%, and others 19.4%. The Peninsula's coastlines reach 14,963 km in total. As it is tilted eastward, most mountains are in the east side and rivers flow westward or southward. And wide plains are located in the middle or downstream of those rivers.

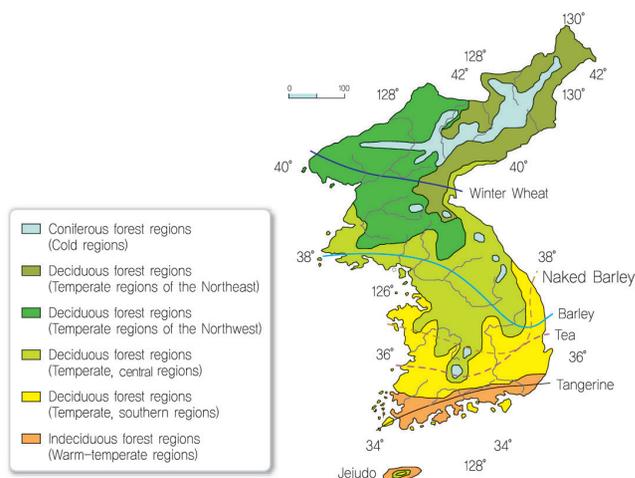
**Figure 1-1** South Korea in Northeast Asia



## Climate

Geographically positioned in the mid-latitudes of the northern hemisphere, Korea has a temperate climate. Its four seasons—spring, summer, autumn, and winter—are distinct. Situated between the Asian continent and the Pacific Ocean, it has a continental climate influenced by seasonal winds. As a result, unlike the seasonal changes of West European countries and other mid-latitude countries, its winter is cold and the summer is sweltering. Spring and autumn generally have clear and dry days thanks to migratory anticyclones. The average annual temperature ranges from 6°C to 16°C, and the regional differences in average yearly temperatures are rather dramatic. Except for the mountainous areas, temperatures range from 10°C to 16°C. The monthly average temperature of August—the hottest month of the year—is 25°C, while that of January—the coldest month—is -0.7°C.

**Figure 1-2** Climate and vegetation distribution



The annual amount of precipitation is 1,500mm in the southern region and 1,300mm in the central region. By season, 50% to 60% of the yearly rainfall comes in summer and 5% to 10% in winter. Northwesternly seasonal winds are generally stronger than southwesternly winds. In autumn (September and October), southwesternly winds change into northwesternly winds. Typically, winds are weak, and the effect of land and sea breezes becomes clear in coastal regions. Humidity is the highest in July, mostly ranging from 80% to 90%. It is the lowest from January to April, when it varies from 30% to 50%. September and October generally have pleasant weathers with humidity posting around 75%.

During the rainy season in summer, torrential rains start from the southern coastal region in late June, reaching the central area, and continues for about 30 days. Occasionally the rainy spell comes in early September. Typhoons come around the Korean Peninsula between June and October, and two or three of them hit the nation on average.

## Population

As of 2020, Korea's population is 51.3 million, or 0.7% of the world's 7.79 billion, ranking 28<sup>th</sup> globally (Korea Population, Health and Welfare Association, 2020). The population growth rate gradually declined from 2% in 1970 to 0.5% in 1990. In terms of population density, Korea ranked third in the world in 2015 with a population density of 519 persons/km<sup>2</sup>.

According to the 2020 World Population Report (Korea Population, Health, and Welfare Association, 2020), those aged between 15 and 64 accounted for 71.7% and those aged 65 or older for 15.8%. One of the main demographic characteristics that have appeared recently is population aging. The aging index (the elderly-youth ratio) has steadily risen from 6.9 in 1960 to 126.5 in 2020. During the same period, the old-age dependency ratio has increased from 5.3 to 22.1. The difference between the aging index of cities and rural areas has been widening considerably. In 2018, the aging indices of cities and rural areas posted 98.7 and 189.6, respectively (Statistics Korea, 2018).

The farm population in 2019 was 2.25 million-4.3% of the total. And the number of farm households amounted to 1.01 million. Although the number of farm households increased to 2.6 million in the latter half of the 1960s, it decreased sharply afterward. The leading causes were industrialization and urbanization amid rapid economic growth. The ratio of farm household population has gradually reduced to the level of advanced countries (2%-4%), such as the United States, Japan, France, Germany, and Australia.

The economically active population accounted for 62.9% of the total in 2019. The number of people working in agriculture and forestry was 1.40 million, or 5.1% of the total population. However, the figure has since been on the decrease.

## 2. National Economy and Agriculture

### An Overview of the Korean Economy

Korea's modern era started with tragic events. In the early 20<sup>th</sup> century, it intended to adopt a western economic system. However, before it fulfilled the conversion, the nation was annexed by Japan. Later, the Korean War broke out in 1950 and pulled the nation into chaos. The nation, rising from the ashes after the war, had to rebuild its economic foundation.

The Korean government endeavored to grow the economy in the 1960s. It set up the Economic Planning Board and made five-year economic development plans to build industrial infrastructures and increase exports. The government increased investments for economic development and provided financing for exporters.

Achieving the high growth in the 1960s and 1970s, the government intervened in the market and distributed resources efficiently. The 2<sup>nd</sup> oil shock at the end of the 1970s pushed the national economy into turmoil. However, using the crisis as an opportunity, the government reformed financial markets and pursued industrial restructuring. As a result, its economy revitalized at an annual growth rate of 6% to 9%.

In the mid-1980s, the value of the U.S. dollar, oil prices, and international interest rates dropped drastically. Korea used these external changes to grow further. It achieved a high current account surplus and stabilized commodity prices. Nevertheless, the public's demand for economic democratization became strong. In 1987, the government listened to the public's call and pursued fairness and welfare, along with efficiency and growth. Besides, labor-management disputes occurred frequently, and average wages rose sharply.

In 1992, a civilian government took power and tried to differentiate itself from the past military regime. It announced the five-year plan for economic development and emphasized people's participation and creativity. It disbanded the Economic Planning Board, which used to lead economic growth. Besides, it pursued a market economy through reforms. The nation gained membership to the World Trade Organization (WTO) and the Organization for Economic Cooperation and Development (OECD). Despite its endeavors for new growth, Korea was hit hard by the financial crisis at the end of 1997. It requested the International Monetary Fund (IMF) a financial bailout, and its economy went through fundamental changes.

A new government took over in 1998 and sought to restructure the overall society aggressively. Thanks to such effort, the economy quickly escaped the shock of the financial crisis. In August 2001, Korea ultimately came out of the IMF's bailout program. Although Korea's foreign currency reserves were nearly run out, it came to hold the world's 6<sup>th</sup> largest volume of reserves in 2015.

After the financial crisis, the government pursued market competition, economic democratization, growth, and fair distribution. Recently, the economic recession nationwide negatively impacts Korea, and the government aims to recover growth potential and create more jobs.

According to the Bank of Korea's National Accounts and the World Bank's World Development Indicators, Korea's nominal gross domestic product (GDP) in 2018 was approximately USD 1.62 trillion, ranking 12<sup>th</sup> globally. Its GNI per capita recorded USD 31,349 in 2018.

**Table 1-1** Main indices of national accounts

Year	Nominal GDP (USD in billions)	GNI per capita (USD)	Growth (%)		KRW-USD exchange rate
			Gross Domestic Product (GDP)	Gross National Income (GNI)	
1970	8.1	254	-	-	311
1980	63.8	1,645	-1.5	-4.2	607
1990	263.7	6,147	9.2	8.9	708
2000	511.8	10,841	8.5	5.5	1,131
2010	1,265.3	22,170	6.5	7.0	1,156
2018	1,620.0	31,349	2.7	1.0	1,100

Source: Bank of Korea, each year, National Accounts.

## Economic Development and the Role of Agriculture

Korea went through modernization and industrialization in the past 60 years, and it has become an economic power-10<sup>th</sup> biggest in the world. Korea's economic structure has grown through primary, secondary, and tertiary industries. Although there were not enough statistics available at the time of the country's establishment, the working population in the primary industry must have reached at least 80% to 90%. However, the number of people working for agriculture, forestry, and fisheries was about 1.39 million in 2019, which was merely about 5.1% of the total economically active population.

The reduction in the agricultural workforce resulting from economic advancement is a common phenomenon among advanced countries. Nonetheless, Korea experienced structural changes two to five times faster than in developed countries. For example, it took around 100 years for developed countries in Europe and the U.S. to be industrialized. However, in Korea, it took only 30 years. The average time for agriculture to be reduced to 5% of the total GDP was 120 years for European countries, including Britain, Germany, France, the Netherlands, and Denmark, 95 years for the U.S., 75 years for Japan, and 30

years for Korea.

The Korean economy is often said to be on the level of advanced countries, but its agriculture is, in fact, on the level of developing countries. If the relative ratio of agriculture in OECD countries is considered, which was about 1% in 2019, Korea's figure shows a level that is about two times higher. And the same is true for the relative ratio of the number of farmers to the total population, which was about 2% to 3% in OECD countries.

The ratio of agricultural GDP to total GDP decreased over time, from 25.4% in 1970 to 13.7% in 1980, 7.5% in 1990, and 1.7% in 2018. Concerning the agricultural workforce, the ratio of the number of farmers to total population decreased from 49.5% in 1970 to 32.4% in 1980, 17.1% in 1990, 10.2% in 2000, and to 5.0% in 2018. In this way, the agriculture's share in GDP was reduced quickly, whereas the percentage of those employed in the agricultural sector was reduced relatively slowly.

Such changes in industrial structure can be considered a decline in agriculture. But these are changes happening in the industrial transition and do not need to be interpreted as deterioration of agriculture.

In most countries, agriculture was the driving force for industrialization during the initial phase of economic development regardless of the type of national system. The ground for capitalism was laid through the dissolution of pre-modern land ownership, which had been the production base for agriculture. And the high levels of growth had been achieved through the supply of cheap labor from rural villages. Many countries, including the U.K. and Japan, went through such transformations.

Agriculture has played significant roles in the Korean economy. First, it has produced and supplied foods for the nation. Korea achieved self-sufficiency in rice production in 1978 through the Green Revolution—a significant achievement

**Table 1-2** Changes in agriculture's status in nation economy

Classification	Relative ratio in GDP				Relative ratio of employment		
	Agriculture, forestry, and fisheries	Agriculture	Forestry	Fisheries	Agriculture, forestry, and fisheries	Agriculture and forestry	Fisheries
1970	29.1	25.4	2.0	1.7	50.4	49.5	0.9
1980	16.0	13.7	1.1	1.2	34.0	32.4	1.6
1990	8.7	7.5	0.4	0.8	17.9	17.1	0.8
2000	4.4	3.7	0.2	0.4	10.6	10.2	0.4
2010	2.5	2.0	0.2	0.3	6.6	-	-
2018	2.0	1.7	0.1	0.2	5.0	-	-

Note: The ratios in agriculture/ forestry and in fisheries were not separately calculated after 2009.

Source: Bank of Korea, each year, National Accounts.

considering that Korea's staple grain is rice. Although the nation's self-sufficiency rate has continued to fall since then, a stable supply of foods has been firmly established as agriculture's vital role.

Second, agriculture contributes to developing other industries. Exchanges in agricultural products and daily necessities help advance commerce and transportation. Besides, crops and livestock products are used as raw materials for different industries.

Third, agriculture preserves the natural environment and national territory. Although synthetic chemicals have caused pollution problems in modern times, agriculture is an environment-friendly industry. Green plants purify the air, while the rural landscape provides amenities. Recently, agriculture's non-economic functions, such as flood control, water resource development, air purification, and land preservation, gain attention. Also, various evidence shows that the economic values of such "public good" functions are much greater than the amount of agricultural production.

Fourth, agriculture preserves genetic resources. At present, over one million

species live on the earth. Such a diversity of biological species plays a vital role in maintaining natural harmony. Korea, with four distinct seasons, has the world's 6<sup>th</sup> largest genetic resources of plants. Its potential for advancing bio-industries by utilizing agricultural genetic resources is very high.

Fifth, agriculture promotes economic and social stability. Food is an indispensable element for humans to live. Therefore, a decline in agriculture will soon cause a drop in related industries and make the nation's economic and social functions unstable. Also, agriculture maintains the population of rural villages by creating jobs. When rural communities decline, urban problems will become more serious. Also, it is a matter of time that rural villages' traditional culture will disappear. The natural landscape, which provides healing to people, can only be maintained through agriculture, forestry, and fisheries.

## References

Korea Population, Health, and Welfare Association, 2020, *The 2020 World Population Report*.

Statistics Korea, 2018, *The Population and Housing Census*.

Bank of Korea, each year, National Accounts.

### 3. Agricultural and Rural Budget

#### National Total Expenditures and Agricultural/Rural Budget

The total national spending in 2020 amounts to KRW 482 trillion, up 1.2% from the previous year. To break down the figure, welfare/employment takes KRW 181.6 trillion, followed by local administration (KRW 80.5 trillion), education (KRW 72.5 trillion), defence (KRW 50.2 trillion), R&D (24.1 trillion), industry/SME/energy (KRW 23.9 trillion), SOC (KRW 22.3 trillion), agriculture and fishery (KRW 21.0 trillion), public security (KRW 20.9 trillion), environment (KRW 8.8 trillion), culture/sports/tourism (KRW 8.0 trillion), and diplomacy/reunification (KRW

**Table 1-3** 2020 budget distribution by sector

(in KRW trillions, %, %p)

Category	2019(A)	2020(B)	Changes	
			(B-A)	(B-A)/A
Total government expenditure	469.6	513.5	43.9	9.3
1. Welfare/ employment (※Jobs)	161.0 (21.2)	181.6 (25.8)	20.6 (4.5)	12.8 (21.3)
2. Education (※Grants for local education)	70.6 (55.2)	72.5 (55.5)	1.8 (0.2)	2.6 (0.4)
3. Culture/ sports/ tourism	7.2	8.0	0.7	9.9
4. Environment	7.4	8.8	1.4	19.3
5. R&D	20.5	24.1	3.6	17.3
6. Industry/ SME/ energy	18.8	23.9	5.2	27.5
7. SOC	19.8	22.3	2.6	12.9
8. Agriculture and Fishery	20.0	21.0	0.9	4.7
9. National Defense	46.7	50.2	3.5	7.4
10. Diplomacy/ reunification	5.1	5.5	0.5	9.2
11. Public security	20.1	20.9	0.8	4.0
12. Local administration and others (※Local grant tax)	76.6 (52.5)	80.5 (52.3)	3.9 (△0.2)	5.1 (△0.3)

Source: Ministry of Economy and Finance, *The 2020 Budget Plans*.

5.5 trillion). The nation's budget for the Ministry of Agriculture, Food, and Rural Affairs (MAFRA) is KRW 15.8 trillion (3.1% of the total), 7.6% up from the previous year. MAFRA's budget plan for 2020 focuses on the revision of the public-purpose direct payment program, farmers' income stability, rural life quality, and the formation of frameworks for the agro-food industry in pursuit of innovative growth.

### **MAFRA's budget plan and size**

The Ministry's budgets are composed of the general account and five items of the special account.

- **General account:** The Ministry's general expenditures, including its operation.
- **Special account for rural development tax management (afterward, the rural development account):** This account is from rural development tax revenues and set for efficiently implementing related projects. It is composed of the account for special rural taxes and the other for structural improvement.
- **Special account for innovative city construction (afterward, the innovative city account):** This account is set for implementing projects to move public organizations to rural areas and to build innovative cities.
- **Special account for energy projects (afterward, the energy account):** This account is set for stabilizing energy prices and implementing energy-related projects.
- **Special account for balanced national development (afterward, the balanced development account):** This account is set for implementing projects to narrow regional balance gaps and improve the quality of life for all Koreans. It is composed of sub-accounts for regional autonomy, regional support, Jeju

Special City, and Sejeong Special City.

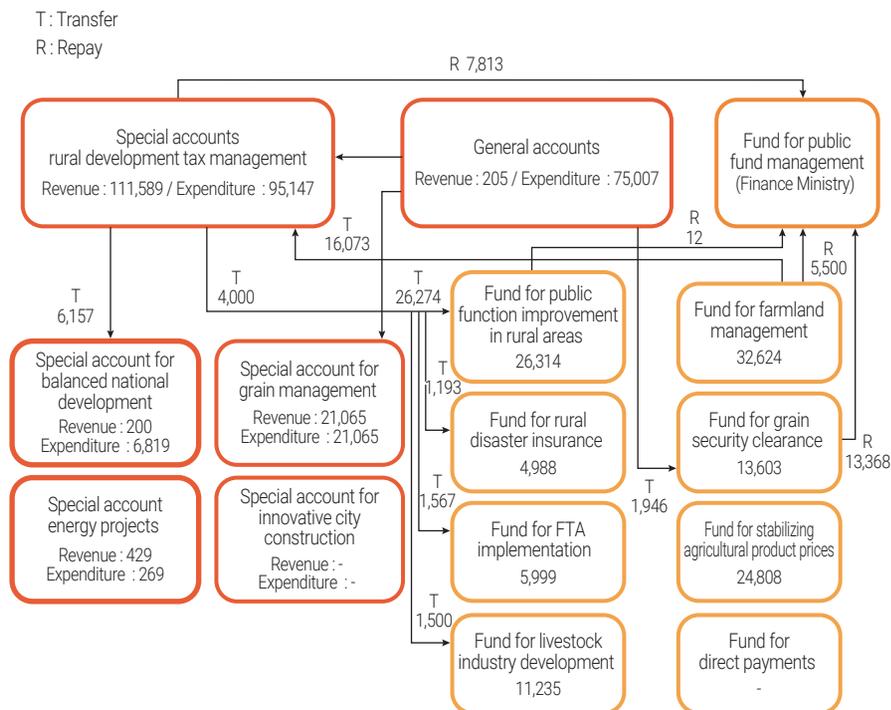
- Special account for grain management (afterward, the grain account): This account is set to control the demand and supply of grains following the Grain Management Act.

MAFRA operates eight funds as follows:

- Fund for agricultural product price stability (afterward, the price stability fund): This fund is set for improving distribution systems and stabilizing prices to expand agro-food export and seek growth in agriculture and food industries.
- Fund for farmland management (afterward, the farmland fund): This fund is set for efficiently managing existing farmland and forming new farmland areas.
- Fund for livestock industry development (afterward, the livestock fund): This fund is for developing the livestock industry by stabilizing prices, improving the industrial structure, raising productivity, and strengthening competitiveness.
- Fund for FTA implementation (afterward, the FTA fund): This fund is set to secure financial resources necessary to help farmers who suffer or may suffer from damages from free trade agreements.
- Fund for direct payments to compensate for income reduction (afterward, the direct payment fund): This fund is for stabilizing farm households' income when rice prices decline. □
- Fund for public function improvement in rural areas (afterward, the public function fund): This fund, partly transferred from the direct payment fund, is newly set in 2020 for improving rural areas' public functions.
- Fund for rural disaster insurance (afterward, the disaster insurance fund):

**Figure 1-3** MAFRA's account and fund flows

(in KRW 100millions)



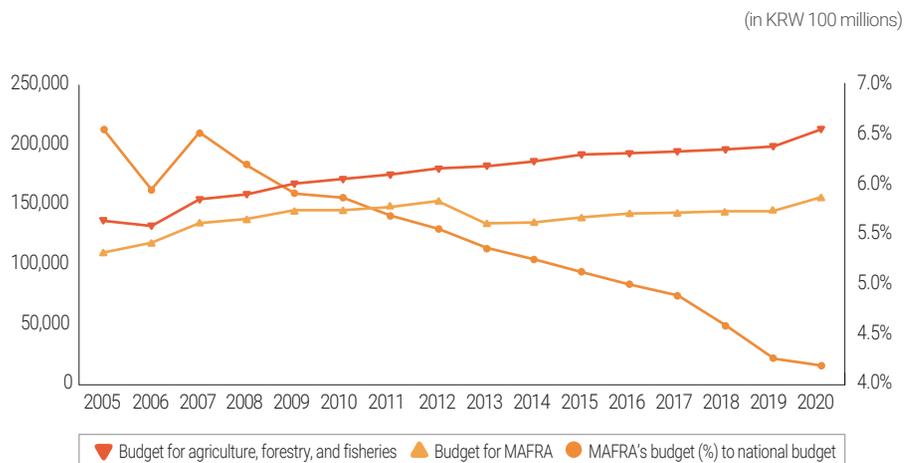
Note: All numbers are total numbers.

Source: KREI, 2020, *The Report on Agro-Food Public Finance*.

This fund is to stabilize farming businesses through the government's compensation for disasters through reinsurance.

- Fund for grain security clearance (afterward, the security clearance fund): This fund is set to manage the principal and interest repayment concerning grain securities issued for grain management.

**Figure 1-4** MAFRA's budget and its share to national budget



Source: MAFRA, each year, *The Overview of Budget and Fund Operation Plans*.

MAFRA's finance (budget), including affiliated organizations<sup>1)</sup> and funds<sup>2)</sup>, increased 1.5 times from 2005 (KRW 12.4 trillion) to 2020 (KRW 19.1 trillion), and the annual average growth for a recent decade is 2.9%. The finance size has continuously declined from 8.3% in 2005 to 4.2% in 2020. The Ministry's budget, excluding affiliated organizations, posted a relatively small increase from KRW 10.3 trillion in 2005 to KRW 15.8 trillion in 2020.

Financial input in the agricultural sector has consistently expanded due to the opening of the agricultural produce market and aggravating conditions for farming businesses. The government executed the rural structural improvement program to prepare for the Uruguay Round in 1992 and put in KRW 82

1) The Rural Development Administration and the Korea Forest Service.

2) The price stability fund, the livestock fund, the farmland fund, the rice income fund, the FTA fund, the disaster insurance fund, the security clearance fund, etc.

**Table 1-4** Budget share by sector (%)

Category	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Innovative growth	17.3	20.1	22.7	22.8	21.2	21.1	19.3	20.1	20.9	21.5
Farm household income stability	18.7	14.5	15.5	17	17.8	20.9	25.8	24.3	21.1	27.8
Rural welfare	2.8	2.7	2.9	3.1	3.4	3.0	3.0	11.4	11.9	7.6
Rural development	9.5	9.0	9.3	8.9	8.6	8.7	8.8			
Grain management	10.7	10.6	10.7	11.2	11.2	11.1	9.8	22.8	24.7	23.0
Distribution reform	12.9	13	15.2	13.5	13.1	11.6	11.5			
Renovation against disasters	18.9	21.7	15.4	14.8	15.4	15	13.8	13.6	13.6	12.2
Food industry	5.3	4.9	5.4	5.7	6.0	5.7	5.2	4.8	4.7	4.8
Other expenses	3.8	3.5	2.9	3.0	3.2	2.8	2.9	0.2	0.2	0.2

Note: The innovative growth sector includes agricultural competitiveness enhancement, and the renovation against disasters includes production base renovation.

Source: MAFRA, each year, *The Overview of budget and fund operation plans*.

trillion (including KRW 10 trillion from the Ministry and KRW 13 trillion from local governments). The investment plan at the time focused on renovating production bases, improving distribution platforms, and upgrading facilities. KRW 119 trillion in total, since then, was invested between 2004 and 2013 for balanced development for rural and urban communities.

The sector of farm household income stability takes the largest portion of the Ministry's budget (27.8% in 2020), followed by grain management and distribution reforms (23.0% in 2020) and the sectors for the innovative growth and competitiveness enhancement (21.5% in 2020). The ratio of competitiveness enhancement was high in the late 2000s. However, recently, the proportion of farm household income stability and grain management has increased, indicating that the budget for direct payments has expanded.

# Agriculture and Rural Budget Status in 2020

## Directions

The agriculture and rural budget for 2020 focuses on rural reforms for humans and the environment by investing in the social and public values of rural areas and the innovative growth of the agro-food industry.

First, the budget plan intends to restructure the direct payment program and stabilize farmers' income and business management.

- Targeting balanced crop production by reforming the existing direct payment scheme focused rice to support other crops.
- Advancing the demand and supply forecast system for crop producers.
- Expanding insurance covering agricultural disasters and enhancing SOC investment to prevent disasters.

Second, the budget plan aims to improve rural life quality for inclusive growth in rural communities.

- Revitalizing the local economy by expanding local food consumption and enhancing social farming by providing rehabilitation services.
- Improving rural life quality by using rural development programs and planning for regional development phase-by-phase through effective rural space planning.
- Spreading the healthy diet culture and working for animal welfare.

Third, the budget plan targets executing projects for innovative growth in the agro-food industry.

- Creating innovative valleys for smart farming and advancing smart farming technologies.

**Table 1-5** MAFRA's total expenditure in 2020 (in KRW hundred millions)

Category	2019 Budget (A)	2020 budget (B)	Change (B-A)	
				%
Budget + fund (total expenditure)	14,659.6	15,774.3	1,114.7	7.6
Budget	9,475.7	7,829.1	△1,646.6	△17.4
Fund	5,183.9	7,945.2	2,761.3	53.3

- Supporting youth start-ups and creating new jobs.
- Building a growth base for new industries with potential, such as insects/microorganisms and foodservice sectors.

Fourth, the budget plan is to supply safe food for the public and improve the industrial environment.

- Strengthening safety measures in food production and preventing the distribution of inappropriate products.
- Resolving livestock excretion and foul smell problems and improving the livestock farming conditions to prevent animal diseases.

### Budget Expenditure by Sector

The Agriculture Ministry's total expenditure (budget and fund operation) in 2020 amounts to KRW 15.78 trillion, 7.6% up from the previous year (KRW 14.66 trillion). Its general budget expenditure posts KRW 7.83 trillion, down 17.4% year-on-year, while its general fund expenditure is KRW 7.94 trillion, up 53.3% year-on-year.

By sector, farm household income stability, innovative growth, food, and grain management sectors increased by 42.1%, 10.9%, 8.5%, and 0.2%, respectively. On the other hand, rural welfare and anti-disaster renovation sectors decreased by 31.1% and 3.3%, respectively.

**Table 1-6** Details of the MAFRA's total expenditure in 2020

(in KRW 100 millions)

Category	2019 budget (A)		2020 budget (B)		YoY (B-A)	
		%		%		%
Total expenditure	146,596	100.0	157,743	100.0	11,147	7.6
Implementation expenditure	142,321	97.1	153,284	97.2	10,963	7.7
Agriculture	135,048	92.1	145,379	92.2	10,331	7.6
• Innovative growth	30,587	20.9	33,908	21.5	3,321	10.9
• Farm household income	30,859	21.1	43,858	27.8	12,999	42.1
• Rural welfare/ development	17,389	11.9	11,976	7.6	△5,413 <sup>1)</sup>	△31.1
• Grain mgmt/ distribution reform	36,249	24.7	36,324	23.0	75	0.2
• Renovation against disasters	19,964	13.6	19,314	12.2	△650 <sup>2)</sup>	△3.3
Food	6,924	4.7	7,515	4.8	591	8.5
Other expenditure	349	0.2	390	0.2	41	11.7
Basic expense	4,275	2.9	4,459	2.8	184	4.3

Note: Decrease from the previous year expanded due to projects transferred to provinces.

1) Rural projects transferred to provinces (KRW 565.5 billion), 2) Production base renovation projects transferred to provinces (KRW 178.8 billion)

## References

Agro-food Policy Management Center, 2020, *The Report on Agri-food Programs*, KREI.

MAFRA, 2019, *The Overview of 2020 Budget and Fund Operation*.

## 4. The Past and Present of Korea's Agricultural Policy

As World War II ended in 1945, Korea was liberated from Japanese colonial rule. However, amid the conflict between communism and capitalism, two different governments were established in the north and the south in 1948. The Korean War broke out in 1950, and North Korea (The Democratic People's Republic of Korea, DPRK) and South Korea (The Republic of Korea, ROK) confronted each other at the forefront of the Cold War Era. Since then, the two Koreas have walked different political and economic paths. This section explores past and current agricultural policies of the Republic of Korea (afterward, Korea).

Korea's agricultural policies went through significant changes over time. Before its industrialization (from government establishment to the 1950s), the nation was an agrarian society, with an industrial structure centered on agriculture. Agriculture, as a major industry, provided food and jobs. However, agricultural productivity was low, and the nation relied on food aids from the U.S. During the industrialization period (until the mid-1980s), the agricultural sector provided a cheap labor force for the manufacturing industry and achieved food self-sufficiency through the Green Revolution. Besides, it started the Saemaul Movement to put more energy into developing rural areas.

In the late 1980s, the major characteristics of Korean agriculture were globalization and agricultural reforms. Its economy followed the global trend of free trade, and the agricultural sector had to open its market to the world. The government implemented agricultural reforms to reorganize systems and policies for market-oriented frameworks.

Entering the 2010s, the government started to focus on improving agricultural

competitiveness and raising rural sustainability. Significant changes at home and abroad in the 2010s included low growth, the demographic cliff, the 4th industrial revolution, climate change, an increase in rural villages going through population aging and decline, and the public's pursuit of various values. Amid these changes, problems in the growth-oriented agricultural policy were criticized, and policies to secure agricultural and rural sustainability became important.

## **Agricultural Policy before Industrialization (up to the 1950s)**

### **Establishing Smallholding through Land Reform**

The Korean society liberated from Japanese colonial rule in 1945 held an industrial structure centered on agriculture. It was a typical agrarian society, with around 80% of the total population working for farming.

The characteristics of agriculture at the time were the broad relationship between landowners and tenant farmers and the small farming system. Around two-thirds of lands were tenanted farms. 85% of farmers did farming on tenanted farms, regardless of their size. They worked hard on small land smaller than 1 ha. Suffering from low productivity and expensive farm rent, they could not produce food enough to feed their families.

Against this backdrop, the newly independent government's top agenda was farmland reform, which would stabilize farmers' livelihood and improve agricultural productivity.

The 1st Constitution of Korea confirmed on land reform by specifying that farmland should be distributed to farmers. The land reform kicked off in early 1950 after the Land Reform Act was established in June 1949. Farmlands that were not cultivated by their owners and those larger than 3 ha were subject to

distribution. The government forcibly purchased them and distributed them to small-income farmers and farmworkers.

The area distributed through the land reform amounted to 585,000 ha. Also, the area sold off by landowners was 713,000 ha. In total, 60% of the total lands in Korea were transferred to farmers through land reform.

The land reform intended to establish the smallholding system, guaranteeing farmers' minimum income. Well-educated children from farm households became an excellent labor force, serving as the engine for national growth. Besides, the collapse of the landed class removed the barrier to Korea's capitalism, which had significance in history.

### **Food Insufficiency and Grain Import**

At the time, agricultural productivity in Korea was very low. Food crops' productivity was around 1/4 to 1/3 of today's, and rice production per 10a was only 160kg. Low technologies, insufficient infrastructures, and lack of production elements, such as fertilizers, chemicals, and farming machines, were the reasons behind low productivity.

Additionally, the Korean War for three years worsened food insufficiency. Therefore, the government focused on its agricultural policy to secure grains and solving food insufficiency. It introduced the grain purchasing system and made a plan to increase food production. The U.S. offered a large amount of crop aids from 1956 to 1964 in accordance with the U.S. Public Law 480.

The crop aid from the U.S. helped considerably to resolve food insufficiency. However, it decreased grain prices and farmers' income, leading to a decline in local grain production in the long term. Especially, with the collapse of the production base for wheat, whose price competitiveness was weak, Korea had to import the crop continuously even after the U.S. aid ended.

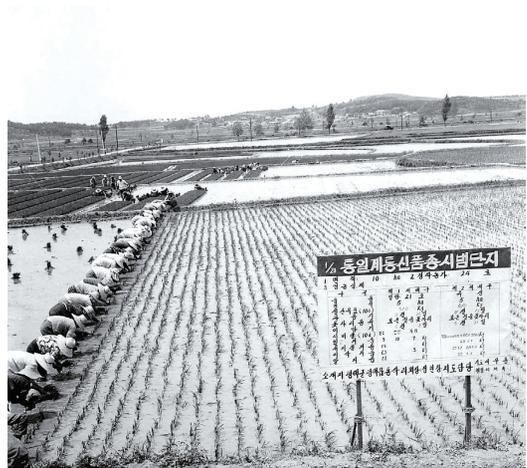
## Agricultural Policy during Industrialization

### Production Increase in Staple Grains

The military regime took power in 1961 and tried to earn popularity through economic development. As its biggest concern was to resolve livelihood problems before economic growth, the government put in public funds in 1961 to clear off high-interest private loans. Besides, it established the Price Maintenance of Agricultural Products Act to guarantee the production cost of agricultural products.

The government also integrated the Agricultural Bank and agricultural cooperatives in August 1961 to establish the National Agricultural Cooperative Federation for financing, marketing, and agricultural extension. Although the new organization contributed to promoting agricultural financing programs and extension projects, some critics say it was under the government's direct control without autonomy. The government established the Rural Development Administration in 1962 and set the framework for agricultural extension projects for farming education and livelihood improvement by reshuffling local administrative organizations.

The 1<sup>st</sup> 5-year economic development plan, launched in 1962, was the first comprehensive economic development program in Korea's history. It was a



Rice testing ground for a new variety, *Tongil-rice*

starting point of Korea's high growth for the next 30 years of modernization.

Its target in agriculture was to achieve food self-sufficiency through agricultural production increases. To fulfill the goal, the government carried out land reclamation projects for farmland expansion, land consolidation and water system projects for production base rearrangement, and extension projects for productivity increase.

The 2<sup>nd</sup> 5-year economic development plan, launched in 1967, aimed to execute large-scale agricultural development programs for food production increases and implemented measures to support prices for rice and other crops-keeping rice prices high and buying barley at high prices from farmers while selling it at low prices to consumers. Besides, the government intended to develop agriculture and manufacturing simultaneously by processing local agricultural produce for domestic and overseas markets but failed to achieve a substantial outcome.

The national economy achieved high growth of 10% per year during the 1st and 2nd economic plans. However, the focus on manufacturing expanded gaps between agriculture and manufacturing and between rural areas and cities, causing massive rural-to-urban migration. As a result, the rural population peaked at 16 million (53% of the total population) in 1967 and started to decrease.

### **Green Revolution and the Saemaul Movement**

As the rapid economic growth expanded the gap between urban and rural areas, the government's economic target changed to balancing growth and stability. It implemented various programs for balanced development by investing in agriculture and fisheries. Still, its focus was on increasing food production. To fulfill the target, the government executed large-scale rural development projects and pursued developing new rice varieties, such as Tongil,

mechanizing farming works, and supporting agricultural product prices.

In particular, *Tongil*, developed in 1971 in cooperation with the International Rice Research Institute (IRRI), substantially expanded rice production. New technologies, such as hotbeds, early cultivation, top dressing, and pest control, contributed significantly to increasing general rice varieties' yield per unit area. As a result, rice production sharply grew from 3.5 million tons in the late 1960s to 5 million tons in the late 1970s.

The Saemaul Movement, launched by the former President Park Jung-hee in 1970, influenced rural communities considerably. With an emphasis on diligence, self-help, and collaboration, the national drive started as a movement to improve the village environment. Using materials provided by the government, such as cement and rebars, farmers broadened village roads, renovated roofs, built town halls, and cleaned up small streams.

The national campaign encouraged farmers to resolve for a better living and transformed rural villages remarkably. Although it was a government-led movement, it significantly changed the rural landscape and gained global attention as an ideal rural development model.



Making rural village roads

## **Endeavors for Non-farming Income Expansion**

High growth in non-farming sectors widened the gap between farming and non-farming sectors. The whole economy grew by 8.4% per year from 1977 to 1988. However, the farming sector grew by 1.0% during the same period. Agriculture's ratio in the gross domestic product shrank from 23.8% to 10.5% during the same period. Going through the period, Korea gradually shifted its economic focus from growth to stability and from market protection to the opening.

The government's agricultural policy turned the focus away from food self-sufficiency. Shedding off the income increase policy for production increase and price maintenance, the government moved to new ideas such as cash crop production and non-farming income development.

The government's price stabilization policy kept agricultural product prices low. The purchase price of rice sharply rose in the 1970s and froze or slightly increased in the 1980s. The government had to relieve its financial burden from the double-price system by lowering the purchase price and raising the release price. Agricultural product imports from other countries expanded significantly. Beef import rose due to an increase in domestic demand. Pepper, garlic, onion, and sesame imports also increased because of a temporary poor harvest in those crops.

As agricultural product prices kept low and imports increased, the rural economy worsened sharply. The government saw limits in farming income increase and turned to non-farming income expansion by forming manufacturing complexes in rural areas. However, the idea failed to be in full swing due to some bad conditions.

Rural economy deteriorated rapidly, and farmers' debt became a social issue in the late 1980s. Finally, the government announced debt relief measures, including non-farming and farming income expansion, debt reduction, and rural life quality

improvement. Although the measures had significance in that they were the first comprehensive plans for agriculture, they had limitations as they focused on debt relief and non-farming income instead of improving rural competitiveness.

## **Agricultural Policy in the Globalized Era**

### **Full-scale Liberation of Agricultural Product Imports**

While the Uruguay Round negotiations were in a deadlock in 1986, the outside pressure on opening local agricultural product markets rose continuously. In 1989, the Korean government announced a 3-year plan to open local markets. Following the plan, the government decided to open for 243 items from 1989 to 1991. As a result, the import liberation ratio of agricultural products amounted to 88.5%.

Besides, Korea had to relinquish the import restrictions under Article 18 (B) in the General Agreement and Tariffs and Trade (GATT), which allow developing countries to apply the restrictions to protect their balance-of-payments. Korea had to remove restrictions over all products immediately but gained an 8-year grace period for a gradual opening for 273 items. Following the decision, the government selected 131 items in 1991 to remove restrictions on them from 1992 to 1994.

Concerning beef import, the government blocked the import after a collapse in cow prices in 1984. The U.S., Australia, and New Zealand filed a petition to GATT in 1989. As a result of bilateral negotiations, Korea agreed to increase import quotas phase by phase.

As discussed above, Korea's agricultural product market opened to the world from the late 1980s to the early 1990s. Accordingly, the government's policy focus shifted to measures to respond to market opening.

## **Agricultural Restructuring**

As the market opening proceeded, the government came up with various agricultural policies. One of the leading policies was the rural restructuring plan announced in 1991. The plan intended to improve agricultural competitiveness and the rural environment for a decade from 1992 to 2001 by investing KRW 42 trillion in total.

However, agricultural restructuring was in full swing after the conclusion of the UR Agreement on Agriculture in 1994. Korea agreed on tariffication without exceptions and had to open all agricultural markets except for rice. However, as it gained a 10-year grace period for rice and maintained a developing country status, it secured some time for preparation.

The government set up a rural development committee composed of 30 private-sector experts in 1994 to prepare for countermeasures. The committee listened to various public opinions and submitted a report to the president. Based on the report, the government made comprehensive measures, including production base renovation, distribution facility modernization, agricultural talent nurturing, full-time farming expansion, and rural welfare enhancement. To secure funds for execution, the government established the special tax for rural development in 1994 and decided to invest KRW 1.5 trillion every year for a decade.

At the time, the target of the agricultural policy was to raise competitiveness by expanding farm business size and nurturing agricultural experts. The government made the largest-ever investment in agriculture, but competitiveness in agriculture were not increased as planned.

## **Supplementary Measures for Agricultural Restructuring**

Amid the financial crisis in 1997, Korea received bailout funds from the

International Monetary Fund (IMF). As a result, its economic policy, including prices, foreign exchanges, and interest rates, was under the IMF's control. The economy worsened rapidly and posted negative growth in 1998. Imported raw material prices rose considerably and so did domestic prices.

The agricultural sector was also hit hard by the financial crisis. Imported feed prices surged due to increased exchange rates, and cow prices collapsed caused by a reduction in meat consumption. Farms cultivating vegetables and fruits in green vinyl greenhouses were in hardship due to oil price hikes. Debted farms suffered from high-interest rates and low consumption. As farming business became unstable, the government focused on stabilizing farm businesses for consistent production.

To achieve the goal, the government executed measures to nurture environment-friendly farming, introducing the direct payment program, and implementing disaster insurance. The government tried to stabilize farm businesses, mostly small farms, through these measures—the agricultural policy characteristics in the late 1990s and the early 2000s.

Previously, agricultural restructuring focused on expanding large farm businesses. However, the emphasis on environment-friendly agriculture was appropriate for small farms. The government established the Environment-friendly Agriculture Fostering Act in 1997 to develop environment-friendly farming. In 1999, the government introduced direct payments for environment-friendly farming to help farms in the environmental protection areas, such as water supply zones, to switch to green agriculture.

Direct payments were under review as an income protection measure to respond to the WTO system in the mid-1990s. In 1998, the government first introduced direct payments for business transfer to encourage aged farmers to retire. Then, the direct payment program was in full swing through its

implementation for rice paddies in 2001. The government avoided excessive rice production by arranging that the paddies in which rice was planted between 1998 and 2000 were subject to the program. In 2012, the government started to implement the program for a part of dry fields and expanded it to cover all dry fields in 2015. The government also offered direct payments for environment-friendly farming, eco-friendly livestock farming, unfavorable farming conditions, and landscape preservation. However, the target scope and budget were not large.

In 1999, the government established the Framework Act on Agriculture, Rural Community, and Food Industry, the backbone of all agriculture-related laws. The Act redefined agriculture, farmers, and rural communities and suggested future directions for them. Besides, it supported future investment and financing plans for agriculture.

### **Negotiations for Deferring Rice Tariffication**

Korea received a special measure for rice in the UR Agreement on Agriculture in 1993. In other words, the Korean government agreed to import rice by 1% to 4% through the minimum market access while deferring rice tariffication for a decade from 1995 to 2004.

In 2004, rice tariffication was again delayed for a decade. In return, the government agreed to expand rice import from 4% to 7.96% gradually every year. It also agreed to increase eating rice import from 10% of the total import in 2005 to 30% in 2010.

The government decided to shift to tariffication in 2014 when the grace period was over and notified its decision to the WTO. In response to rice negotiations, the framework of the local rice policy-the purchase system and the direct payment program-transformed. The government abolished the rice purchasing system, which was in action for five decades, and introduced the

public stock holding system for food security. The government also enhanced the direct payment program in response to price drops due to its reduced market intervention and the agricultural market opening. In other words, it implemented variable direct payments to compensate for part of the difference between the target and market price (deducing fixed direct payments from 85% of the difference), in addition to fixed direct payments to pay for the cultivation area. The target price was an average of three years, except for the maximum and minimum prices during the previous five years.

As fixed direct payments have not been linked to production or prices, they are included in the WTO green box (subject to permission). However, as variable direct payments are linked to market prices and target lands that produce rice in the same year, they are classified as the amber box (subject to reduction).

As of today, in 2020, rice tariffication applies, and the tariff ratio of rice is 513%. The government set up the public-purpose direct payment program,

**Figure 1-5** Countries in free trade agreements with Korea (as of February 2020)



Source: <https://www.customs.go.kr>. Search date: July 20, 2020.

integrating fixed direct payments for rice, dry-field farming, and unfavorable farming conditions. On the other hand, variable direct payments for rice were abolished.

### **FTA and Responses in Agriculture**

As free trade became a trend worldwide in 2000, free trade agreements became the norm. Korea was reluctant for free trade agreements, but it became active in negotiations after its FTA conclusion with Chile in 2002. As of today, in February 2020, Korea holds 16 free trade agreements with 56 countries, including Chile (effective in 2004), 10 ASEAN nations (2007), 28 EU nations (2011), the U.S. (2011), Canada (2015), China (2015), and 4 Latin American nations (2019). As Korea's economic growth significantly relies on external trades, it has to be proactive in multilateral trade or FTA negotiations. However, it is impossible to avoid influences on local agricultural production and prices. In response, the government enacted the Special Act on Assistance to Farmers, Fishers, etc. following the Conclusion of Free Trade Agreements. In the short term, it introduced direct payments for FTA damage compensation and subsidization for FTA-related business closure. It has also implemented various long-term plans to raise rural competitiveness.

## **Current Administrative Directions and Major Policies**

### **External and Internal Conditions**

Korean rural communities face external and internal challenges. Internally, birth rates and the working-age population (aged 15 to 64) continuously decline, while the nation entered into an aging society due to extended life

expectancies. Amid low economic growth (2~3%) since 2011, the wealth gap has widened, and the public's demand for fairness is strong. The agricultural policy framework needs to shift from the central government's leadership to the local governments' bigger roles and the public's participation. Besides, the public become aware of various rural values, such as the stable supply of healthy agro-food, environmental and ecological protection, ruralness, and balanced national development. The technologies of the 4th industrial revolution, including the Internet of Things, artificial intelligence, and big data, converge into the existing industries and bring about transformations in social and economic systems. While the needs for climate change and environmental protection measures have increased, the Korean society shifts to pursue various ideas, such as social participation, community values, and environmental protection.

Other challenges Korea's rural communities face include aggravating trade conditions from uncertainty in international trades and slow consumption in local products, and the widening urban-rural income gap. Promising agro-food industries, including functional foods, restaurants, seed/ biotechnologies, are likely to create high values. On the other hand, rural communities suffer from insufficient human resources due to population aging and a reduction in youth influx. Consumption patterns change toward health and safety. Also, people are more concerned about ethical spending in consideration of society and the environment. Therefore, it is necessary to manage food issues from a comprehensive perspective considering production, consumption, safety, nutrition, welfare, and the environment, and enhance the underprivileged's access to food. The rural population is temporarily on the rise, but many *myeon* (townships) suffer from population aging and decrease. Along with perceptual changes for migration to rural areas and rural tourism, rural areas are likely to play a significant role as a venue for rural and urban residents' co-prosperity.

### **Paradigm Shift, Future Directions, and Tasks in Agricultural Administration**

The government suggested a paradigm shift in agricultural administration through the 2018~2022 development plan for Agriculture, Rural Communities, and the Food Industry.

First, it shifts its focus from products to humans in agricultural activity. Specifically, it puts a priority on farmers' income and life quality. Farmers' status will be redefined as creators of public values, including health food provision and ecological/ landscape conservation.

Second, the government expands its target for agricultural administration to include not only farmers and rural residents but also the entire public, including consumers. It intends to realize multi-functional farming to provide rural communities' various economic, social, and environmental values to the public.

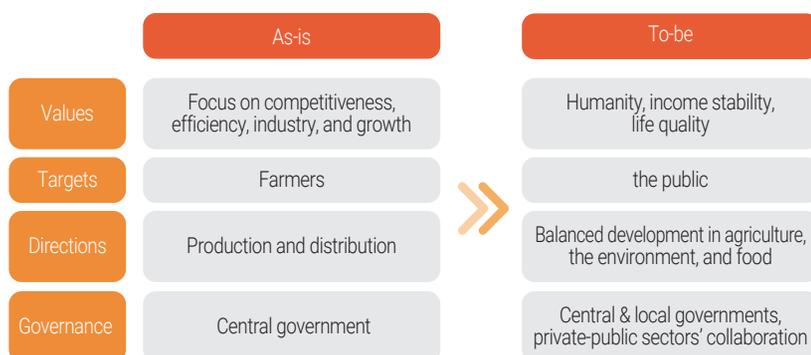
Third, the future direction should shift from agricultural productivity to a balanced development in agriculture, the environment, and foods. For the shift, the government plans to enhance innovative capabilities in agriculture and pursue sustainability for environment-friendly production and safe food provision.

Fourth, the administrative system changes from the central government's leadership to horizontal governance for participation and collaboration. For the transformation, the government has to build a collaborative system between private and public sectors to implement innovative measures from the perspective of the general public including farmers.

The development plan in Figure 1-6 above has established the administrative directions as follows:

First, The government will enhance stability for farmers in terms of product prices, income, and farming. It will expand the direct payment program, expand safety nets for business and income, stabilize vegetable prices, and innovate

**Figure 1-6** Paradigm shift in agricultural administration



Source: MAFRA, 2018, *The 2018-2022 Development Plan for Agriculture, Rural Communities, and the Food Industry*.

distribution systems to minimize price uncertainties. Besides, the new plan will remove the imbalance in rice demand and supply through consumption increase and production control, and improve competitiveness through quality-centered systems for production, distribution, and consumption. Second, the administrative focus will move toward innovation for sustainable farming through balancing the economy, society, and the environment. For the direction, the government will raise innovative capabilities in agriculture through smart farming and R&D implementation. It will create new jobs by nurturing new industries, including bio-materials and pet animals. New farming resources, such as young farmers, will be developed and eco-friendly livestock farming will realize sustainable progress in rural areas.

Third, the new plan will establish safe food supply chains. The government will set up the national/ local food plans for food safety and support the public's healthy dietary life by introducing vouchers for kids' fruit snacks and agro-foods. Besides, the food traceability and place-of-origin labeling will raise trust

in agricultural administration by enhancing safety and quality management.

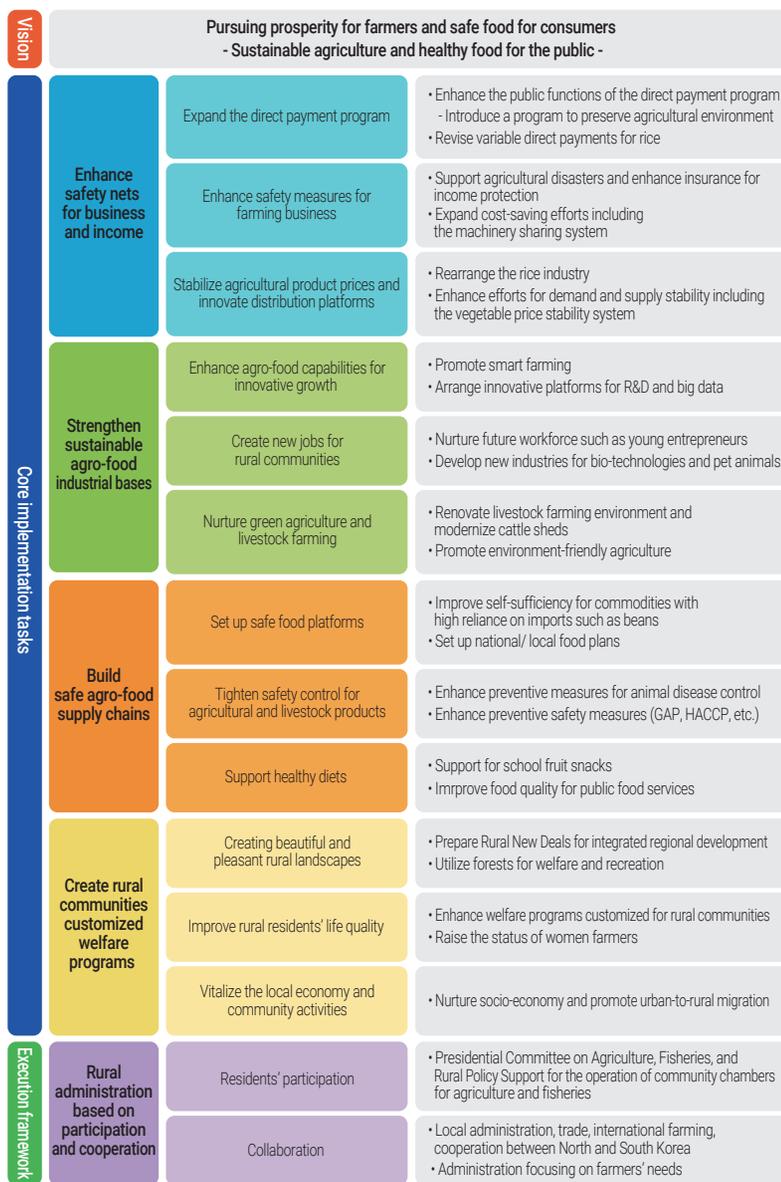
Fourth, the plan targets to make rural life better to elicit population influx. The government will improve settlement conditions and pursue consolidated regional development by nurturing the agro-food industry and rural tourism. It will speed up the effort to restore ruralness, including rural landscapes. Additionally, customized welfare and social service programs will be developed, and a new rural socio-economic model will be established, which will offer social services necessary for each community.

Following the basic directions, the government has implemented major tasks as follows: Figure 1-7

Expected effects from the implementation of the tasks are as follows: Figure 1-7

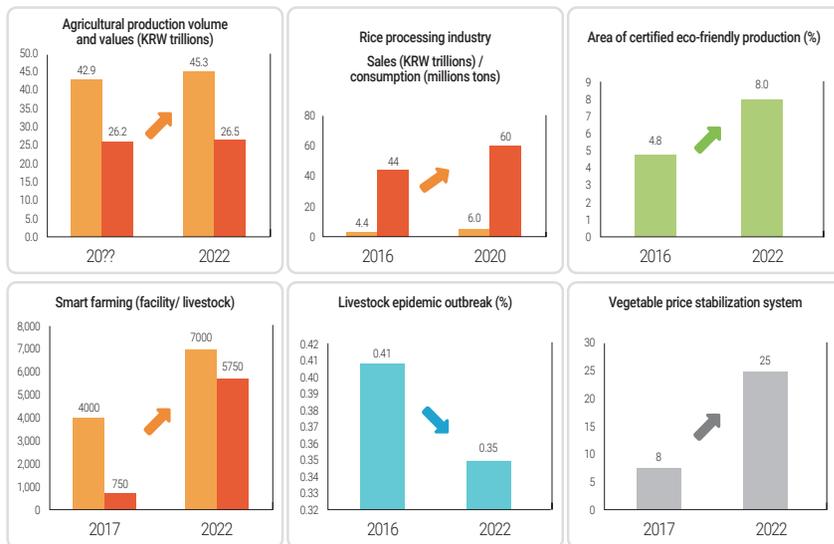
Climate change responses and animal disease control capabilities will improve, and smart farming will increase productivity. As a result, production volume and values will expand. Especially, the revised production control system and the abolition of variable direct payments for rice will balance rice demand and supply, and add rice values through quality improvement. Concerning farm products with a high reliance on imports, the government will expand local production and stabilize supply through imports. Environment-friendly agriculture, based on the consumer's trust, will supply healthy food to the public. Eco-friendly livestock farming and advanced animal disease control and prevention technologies will remove an imbalance in demand and supply. The expanded vegetable price stabilization program will guarantee the producer's selling prices and remove the consumer's concern for unstable prices.

**Figure 1-7** Agricultural vision and implementation tasks



Source: MAFRA, 2018, *The 2018-2022 Development Plan for Agriculture, Rural Communities, and the Food Industry*.

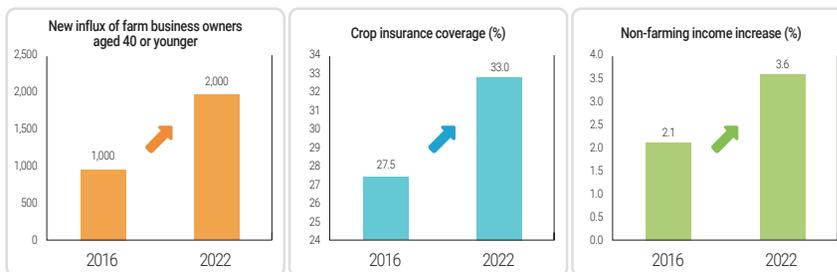
**Figure 1-8** Key rural indicators



Source: MAFRA, 2018, *The 2018-2022 Development Plan for Agriculture, Rural Communities, and the Food Industry*.

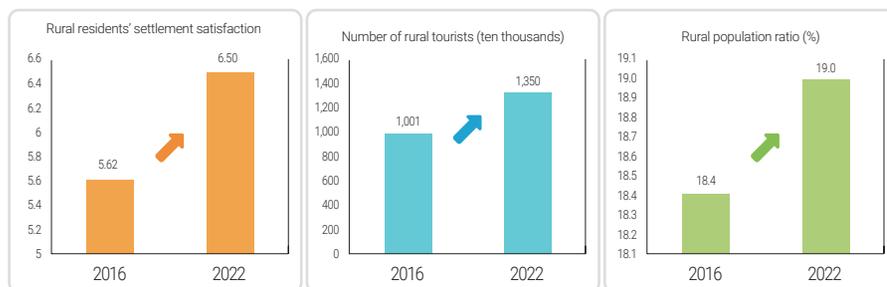
Concerning the farming economy, the innovative growth base will be prepared based on smart and social farming. The aged labor resources will be revitalized with the influx of young farmers. Disaster insurance, business

**Figure 1-9** Key indicators related to the rural economy



Source: MAFRA, 2018, *The 2018-2022 Development Plan for Agriculture, Rural Communities, and the Food Industry*.

**Figure 1-10** Key indicators related to rural communities



Source: MAFRA, 2018, *The 2018-2022 Development Plan for Agriculture, Rural Communities, and the Food Industry*.

rehabilitation programs, and revenue guarantee insurance will minimize farming business risks from disasters and debt burdens caused by interest rate hikes. Photovoltaic power generation, rural convergence industry, and rural tourism will give farmers new opportunities to raise income.

Settlement infrastructure renovation and welfare improvement for transportation, housing, and child care will raise rural life quality. The preservation of ruralness, including the environment, ecology, and traditional cultures, will increase rural values and attract people to rural landscapes for tourism or a choice of better living.

The Presidential Committee on Agriculture, Fisheries, and Rural Policy, launched in 2019, reported the vision and strategy for sustainability in rural communities to the president. The committee suggested sustainability, inclusiveness, innovation, and decentralization as the new directions for rural administration. It also proposed a shift in the administrative framework for urban-rural co-prosperity by guaranteeing the public's right to safe food, preserving rural natural resources, and raising rural residents' quality of life. For the framework change, it came up with 12 reform agendas and 3 action plans.

**Table 1-7** 12 Reform Agendas and 3 Action Plans for a shift in rural policy

<b>12 reform agendas</b>	① Shift to budget systems focusing on subsidies for rural communities' public values and pluralistic functions.
	② Clarify the nation is responsible for stabilizing agricultural and fishery product prices.
	③ Revitalize rural economy by utilizing various rural resources and social economy.
	④ Create new young/ women leaders to open a new chapter for rural communities.
	⑤ Improve quality of rural life and make rural population compose 20% of the total.
	⑥ Respond to climate changes and preserve rural resources.
	⑦ Set up the food system for public health and regional economy.
	⑧ Terminate illegal land ownership and protect farmers' land use rights.
	⑨ Rearrange rural policy systems based on cooperation among the central government, local governments, and the private sector.
	⑩ Establish the identity of cooperatives and reform the agricultural/ fishery/ forestry cooperations.
	⑪ Establish the foundation for the peace economy through North-South Korea cooperation in agriculture, fishery, and forestry.
	⑫ Reform for sustainability and decentralization in rural policy.
<b>3 action plans</b>	① Reform financing and loan/ investment systems for the agricultural policy centered on the direct payment program.
	② Rearrange rural policy systems for autonomous rural administration.
	③ Arrange reform bases for rural communities, agriculture, and fishery.

Source: 3<sup>rd</sup> Special Committee for Farming and Fishing Communities. Dec 3, 2019. *Sustainable Vision and Strategy for Rural Communities*.

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3<sup>rd</sup> Special Committee for Farming and Fishing Communities. Dec. 3. 2019. Sustainable vision and strategy for rural communities.

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