

# **The Republic of Korea's National Food Plan**

## **1. Background**

Surging global grain prices and disruptions in logistics services caused by COVID-19 have highlighted the importance of food security. In addition, there have been calls for sustainable production and consumption and greater social equality in nutrition and diet.

The Republic of Korea has established its National Food Plan to join global efforts to achieve the United Nations Sustainable Development Goals (SDGs) and to address food issues such as stable food supply, sustainable production and consumption, and access to a healthy diet for all.

## **2. Diagnosis of food value chains in Republic of Korea**

The plan examines the Korean food system in the following three aspects: (1) food supply chain, (2) food production and consumption in the context of climate change and the environment, and (3) food accessibility.

### **2-(1) Food supply system**

With the exception of rice, which is a staple crop, the Republic of Korea is a small-scale producer of grains such as wheat and beans, leaving it highly dependent on the international market. The country is vulnerable to uncertainties such as the unprecedented supply chain disruption and the rising global grain prices caused by COVID-19. The overall self-sufficiency rate of food in Korea recorded

45.8% in 2019 with 92.1% for rice, 26.7% for beans, 3.3% for maize, and just 0.7% for wheat.

Moreover, major domestic agricultural resources are declining. Industrialization and urbanization have reduced the total size of available farmlands by 25% in 2019 compared to 2009. The rural labor force is reducing in size, and the average age of farmers and fishers is 66 years as of 2020.

Furthermore, a lack of interest in local products among producers, processors and consumers imposes a burden on promoting the local and national self-sufficiency rate.

## 2-(2) Food production and consumption in the context of climate change and the environment

Notwithstanding the downward trend in the use of chemical fertilizers on the farms, it is still high, requiring systematic management. Another challenge is the increasing annual volume of livestock excreta, which was 55.92 million tons in 2019, up by 10.26 million tons or 22.4% compared to 2000 statistics.

Climate change and more frequent natural disasters are lowering the quality and quantity of agricultural and fisheries products. Food is being increasingly wasted by consumers due to the increasing number of single-person households and changing dining-out patterns. Moreover, only sell-by dates are shown on food products sold, which are relatively shorter than use-by dates, generating more food loss and waste. The amount of food waste went up by 25%, from 4.17 million tons in 2000 to 5.22 million tons in 2019.

### 2-(3) Food accessibility

Despite economic growth, nutritional inequalities between rich and poor have been witnessed in Korean society as lower-income communities were reported to have poorer nutritional consumption and higher obesity rates. However, food assistance for the vulnerable is still not enough, requiring policy efforts for a balanced diet for healthy lives for Korean people.

For food safety, an anti-pesticide regulation called the Positive List System (PLS) for agricultural products was introduced in 2019. At the same time, Korea intends to strengthen the safety management of domestic and imported agricultural, livestock, and fisheries products.

## 3. Aims of the National Food Plan (National Pathway)

### 3-(1) Development of stable food supply chain

#### 3-(1)-① To better deal with food supply crises

The Republic of Korea will supply stable food to markets during emergency situations, such as disasters, by building up public grain stockpiles of rice, wheat, and beans.

We will make efforts to stabilize the grain-import supply chain in emergency situations. Moreover, Korea will strengthen international cooperation through food aid and official development assistance (ODA).

### 3-(1)-② To secure food supply chain fundamentals

The Republic of Korea will improve its grain self-sufficiency rate by expanding specialized production complexes and infrastructure for wheat, beans, and other major grains. A mandatory self-help fund will be adopted for horticultural and livestock products to enable producers to self-stabilize food supplies.

Korea will secure sufficient amounts of production factors such as land and labor for food self-sufficiency. Secondly, Korea will establish a farmland information analysis system for farmland rent. Thirdly, Korea will launch more Agri-Work Centers which match workers to employers in agricultural and fishing communities to support their settlement in rural areas, including financial and housing aid. Fourthly, Korea will set Total Allowable Catch (TAC) levels for more species and innovate overcrowded and old fish farms for fisheries resources recovery.

### 3-(1)-③ To improve local self-sufficiency by building strong local food systems

Local governments are encouraged to establish the local food plans. Central government agencies will support their survey and research activities and regionally tailored governance building.

At a later stage, Korea will run regional Comprehensive Food Support Centers to promote farmers to purchase agricultural materials, process food, and sell it collectively. Through collaboration with public school food providers and local restaurants, we will drive consumption of local food.

3-(2) Establishment of eco-friendly and sustainable production and consumption systems

3-(2)-① Eco-friendly production and consumption of agricultural and fisheries products

The Republic of Korea will increase eco-friendly agricultural districts and develop circular agriculture models to each local area where fertilizers and electricity produced from animal excreta is used for agricultural activities. As for the fishery sector, environment-friendly aquaculture will be nurtured through eco-friendly direct payment, banning the use of polystyrene foam buoys, and mandatory use of green formula feed.

Next, Korea will prevent food waste and reuse it. To reduce food loss at the distribution stage, we will adopt the use-by date system and promote education and campaigns to promote a responsible diet.

Korea will increase public production of bio-gas from food waste and develop metropolitan-level waste managing systems to establish integrated energy generation facilities.

3-(2)-② To better deal with climate change

The Republic of Korea will ascertain what are the optimal regions for growing agricultural products by monitoring the impact of climate change on the agricultural ecosystem. Also, we will identify risks according to the life cycle of plants and provide information on climate-related disasters.

Korea will conduct research on climate-resilient varieties and subtropical fruits and vegetables. We will boost measures to control pests and diseases based on inspections to find newly emerging pest species as a result of climate change.

Korea will maintain a safe production environment against natural disasters in several ways. Firstly, we will stably supply irrigation during droughts and floods with drainage facilities in low-lying fields and stored water. Korea will develop technologies to prevent the erosion of highland field topsoil and expand sewage treatment facilities to protect water designated for aquaculture.

### 3-(2)-③ To achieve carbon neutral agricultural and fishery sectors

The Republic of Korea will reduce the carbon footprint of the agricultural and fishery sectors with the nutrients management system to use less chemical fertilizer and with reduced number of offshore fishing boats and development of eco-friendly hybrid vessels. In the livestock sector, Korea will reduce methane emissions through mandatory installation of animal manure treatment facilities and promotion of manure-based energy generation facilities.

Korea will use less fossil fuel in agriculture by increasing the use of renewable energy, including geothermal energy and waste heat in greenhouses, and by developing electric agricultural machinery.

Korea will promote R&D to develop precision agri- and aquacultural models and to build smart farm complexes such as the Smart Farm Innovation Valley, thereby upgrading and spreading precision agriculture and aquaculture.

### 3-(3) Ensuring universal access to food

#### 3-(3)-① To boost food access for vulnerable communities

Above all, the Republic of Korea will further provide food to the vulnerable by improving the rules and regulations based on the results of the on-going pilot agri-food voucher project.

Furthermore, Korea will continue to provide eco-friendly food for healthy pregnancies, supplementary food and health management services for infants and pregnant women, and fresh fruit for elementary school students.

#### 3-(3)-② To improve nutrition and health through good food

The Republic of Korea will promote education on a balanced diet, improve the hygiene and safety of public school meals, and monitor food and nutrition intake by specific social groups: infants, students, senior citizens, etc.

In addition, Korea will reduce sodium and sugar intake by investigating and announcing the sodium and sugar levels in children's food and setting sodium limits in school meals.

Korea will integrate food and nutrition information from different ministries to provide standardized information to consumers for easier access and convenient use of it. The information can be used to create new school meal menus, manage nutrition, and provide better food options.

### 3-(3)-③ To better manage food safety

The Republic of Korea will investigate the amount of heavy metals in farmland soils, devise management criteria, and monitor food poisoning and norovirus bacteria levels in agricultural water, thereby preventing the production and market access of hazardous food.

Korea will apply the Positive List System (PLS) to livestock and fisheries products by 2024, after a sufficient preparatory process.

Korea will monitor residual pesticides in e-commerce food and establish an online illegal food market surveillance system. Korea will further ensure imported food safety by integrating several traceability systems of imported foodstuffs operated by various authorities and by applying the Hazard Analysis Critical Control Points (HACCP) to popular imported items.

### 4. Basis of implementation

The Republic of Korea will set up a legal basis for implementing its National Food Plan. A public-private consultation body will be operated, where relevant ministries, stakeholders and civil society can participate to check progress and coordinate the interests of different groups.

A new Republic of Korea National Food Plan will be established every 10 years and revised every 5 years for timely actions, given the previous implementation status and changes in circumstances.