The proportion of agriculture, forestry, and fishing to the national economy has dramatically declined since full-fledged industrialization began. The gross value added in the agriculture, forestry, and fishing sectors peaked at about 30 trillion won in the 2010s. On the other hand, the proportion of the gross value added in the agriculture, forestry, and fishing sectors to the total industry fell dramatically from about 29% in 1970 to roughly 2.4% in 2010, and its proportion has gradually decreased.

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There are regional differences in the gross value added in the agriculture, forestry, and fishing sectors, respectively. Gyeongsangbuk-do, Gangwon-do, and Jeollanam-do showed the highest number of workers in the agriculture, forestry, and fishing sectors in 2020, with about 5.4%. In addition, according to the number of workers employed in the agriculture, forestry, and fishing sector in 2018, Jeju-do showed the highest size proportion with about 9.9%, followed by Jeollanam-do with about 7.9%, Jeollabuk-do with about 7.7%, and Gyeongsangbuk-do with about 5.4%. In addition, according to the number of workers employed in the agriculture, forestry, and fishing sectors in 2020, Jeju-do showed the highest number of workers in the agriculture, forestry, and fishing sectors, respectively.

In 2019, the population structures of farm households by region showed that persons aged 65 years or older comprised about 15% of the total population. However, there are regional differences in the population structures of farm households. For example, the proportion of farm households in the ages of 20s and 30s is relatively high in Jeju-do, partially because of the influx of young adults and middle-aged people. From 1970 to 2019, the population in the agriculture, forestry, and fishing sector was aging rapidly. The proportion of the population aged 65 years or over in the agriculture, forestry, and fishing sector increased from about 11% in 2010 to about 46% in 2019.

From 1970 to 2020, the gross value added per worker engaged in the agriculture, forestry, and fishing sectors increased. For example, its gross value added per worker reached about 55 trillion won, followed by Jeollanam-do with about 52 trillion won, Changwon-si with about 41 trillion won, and Gyeongsangbuk-do with about 38 trillion won. And, according to the regional proportion of gross value added in the agriculture, forestry, and fishing sector in 2019, Jeju-do showed the highest proportion with about 93%, followed by Jeollanam-do with about 79%, Jeollabuk-do with about 77%, and Gyeongsangbuk-do with about 54%. In addition, according to the number of workers employed in the agriculture, forestry, and fishing sectors in 2020, Gyeongsangbuk-do, Gangwon-do, and Jeollanam-do showed the highest number of workers in the agriculture, forestry, and fishing sectors, respectively.

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The maps of the cultivated area and arable land in 2020 show the current situation of agricultural production by region. According to the cultivated area in 2020, Gyeongsanbuk-do showed the highest area with 164,307 hectares, followed by Chungcheongnam-do with 155,051 hectares, and Jeollabuk-do with 127,126 hectares. According to the cultivated area of a dry field in 2020, Gyeongsanbuk-do showed the highest area with 150,187 hectares, followed by Jeollabuk-do with 150,099 hectares, and Gyeonggi-do with 150,898 hectares. As of 2020, the arable land area reaches the highest in Jeollabuk-do (690,469 hectares), followed by Jeollabuk-do (45.6%) and Jeongbuk-do (44.2%). The arable land ratio appears high in Jeollabuk-do Gyeonggi-do with 73,909 hectares. As of 2020, the arable land rate was the highest in Gimje-si (48.0%), followed by Iksan-si (45.0%) and Muan-gun (44.2%). The arable land rate seems high in Jeollabuk-do, Chungcheongnam-do, and Gyeongsanbuk-do.

The type of agricultural production is subdivided into open-field production and greenhouse production. The open-field production contains various crops, such as grains, including rice, barley, and wheat, vegetables, orchards, specialty and medicinal crops, and other crops. There are regional differences in the cultivated land area by crop types. For example, in 2020, the cultivated land area of paddy rice was the highest in Jeollabuk-do (131,204 hectares) and Jeollabuk-do (131,089 hectares). The cultivated land area of vegetables in 2020 was the highest in Gyeongsanbuk-do (127,126 hectares), followed by Jeollabuk-do (136,677 hectares) and Jeollabuk-do (16,467 hectares). The cultivated land area of barley was the highest in Gyeongsanbuk-do (11,193 hectares), and the cultivated land area of wheat was the highest in Gyeongsanbuk-do (11,394 hectares). The cultivated area of barley and wheat in 2019 was 1.3 million hectares, which is a decrease of roughly 675,000 hectares (29.6%) compared to 1975. Rice field area decreased faster than dry field area as rice field area decreased by about 850,000 hectares (-35%) and dry field area decreased by about 210,000 hectares (-22%) during the same period. The area of cropland decreased from 154,900 hectares in 1975 to 121,347 hectares in 2019. In order to realign the cultivated land area per farm household, the area of cropland increased from 0.94 to 1.57 hectares in 1975 to 2019, reflecting the growth of agriculture. In this regard, the government has implemented various policies such as fostering agricultural labor forces, improving the production facility, the farms mechanization, and the facility modernization to enhance the competitiveness of agriculture since the early 1990s. The increase in cultivated land area per farm household, in particular, represents achieving an economy of scale which allows for lower production costs and increased price competitiveness. The number of farms increased less than 5% of the cultivated area decreased from 690,000 households in 1975 to 213,473 households in 2019, whereas the number of farms households with over 3.5 hectares of the cultivated area increased from 33,082 households in 1975 to 76,364 households in 2019. For the same period, the size of the cultivated area per farm household increased through these changes. However, the cultivated land area per farm household is still not large compared to other countries.

The changes in the agricultural production by major crops from 1980 to 2019 reveal that the production volume of barley and wheat, vegetables, orchards, specialty and medicinal crops, and major open-field crops in Korea, were mapped as shown. After leveling rice, the area that cultivate barley and wheat is mostly distributed in 2020. In 2019, Gyeongsanbuk-do, Jeollabuk-do, and Gyeongsanbuk-do accounted for over 40% of the total production of barley and wheat. Vegetables accounted the highest production among the open-field crops. The vegetable production was the highest in Sunchon-si (126,823 tons), followed by Changwon-si (87,513 tons), Iksan-si (53,774 tons). Among the metropolitan cities, Incheon (16,500 tons) recorded the highest production of rice. Rice production volume in rice-favored regions is the highest due to its volume and yield. The specialization quotient (SQ) was calculated to identify the degree of regional specialization for some crops. The SQ of rice is measured as rice's proportion of a regional total for a cultivated area divided by rice's proportion of the national total for a cultivated area. In 2020, the SQ of rice of 1.08 reveals that the region has a higher concentration of rice farming than the nation. The rice production volume peaked in 1990 and has been declining since then. However, due to the recent increase in the production volume per cultivated area, the decreasing trend is slowing down. The production volume of rice in 1990 was about 630,000 tons, whereas its production volume was about 3.5 million tons in 2020. The rice cultivated area peaked in 1967 (about 9.26 million hectares), has declined ever since, and has decreased sharply since 2003. As a result, the area of rice cultivation was no more than about 735,000 hectares in 2020. The regional production volume of barley and wheat, vegetables, orchards, specialty and medicinal crops, and major open-field crops in Korea, were mapped as shown. After leveling rice, the area that cultivate barley and wheat is mostly distributed in 2020. In 2019, Gyeongsanbuk-do, Jeollabuk-do, and Gyeongsanbuk-do accounted for over 40% of the total production of barley and wheat. Vegetables accounted the highest production among the open-field crops. The vegetable production was the highest in Jeollabuk-do (126,823 tons), followed by Changwon-si (87,513 tons), Iksan-si (53,774 tons). Among the metropolitan cities, Incheon (16,500 tons) recorded the highest production of rice. Rice production volume in rice-favored regions is the highest due to its volume and yield. The specialization quotient (SQ) was calculated to identify the degree of regional specialization for some crops. The SQ of rice is measured as rice's proportion of a regional total for a cultivated area divided by rice's proportion of the national total for a cultivated area. In 2020, the SQ of rice of 1.08 reveals that the region has a higher concentration of rice farming than the nation. The rice production volume peaked in 1990 and has been declining since then. However, due to the recent increase in the production volume per cultivated area, the decreasing trend is slowing down. The production volume of rice in 1990 was about 630,000 tons, whereas its production volume was about 3.5 million tons in 2020. The rice cultivated area peaked in 1967 (about 9.26 million hectares), has declined ever since, and has decreased sharply since 2003. As a result, the area of rice cultivation...
Changes in Agricultural Management

The maps of the distributions of farm households by the types of business in Korea. According to the proportion of part-time farm households in the total number of farm households, expressed as choropleth maps. The number of part-time farm households in 2020 was the highest in Gyeongsangbuk-do (31.2%), followed by Jeollanam-do (28.5%), Gyeonggi-do (27.9%), and Jeju-do (26.7%). According to the number of full-time farm households by region, expressed in the barchart map, Seoul had the highest intraregional rate among the metropolitan cities, whereas Jeju had the highest intraregional rate among the provinces in 2019. In contrast, the number of full-time farm households in Gyeongsangbuk-do were recorded as the highest and the second-highest province in the intraregional rate of part-time farm households, respectively.

The type of part-time farm households is subdivided into Type 1 and Type 2. The agricultural income of Type 1 part-time farm households is higher than non-agricultural income. In contrast, the agricultural income of Type 2 part-time farm households is lower than non-agricultural income. The farm households’ composition by types of business had changed from 1970 to 2019. The proportion of part-time farm households, which was very low at 14.6% in 1972, increased rapidly since the 1980s and reached 40.6% in 2013. Indeed, the decreasing rate of the number of full-time farm households turned around (-21.3%) in higher than that of the number of part-time farm households (-14.8%) during the same period.

The number of farm households by sales volume had changed from 2002 to 2016. The proportion and number of farm households with annual sales of more than 100 million won were increased. However, the polarization of farm households’ income is becoming more and more apparent, as small-scale farm households with annual sales of less than 5 million won still account for over 75%. An agricultural commercialization progressed, the number of farm households specializing in rice decreased more than that of vegetables or orchards. Thanks to the mechanization of agriculture and the development of agricultural technology, both labor and land productivities are increasing rapidly.

Changes in Agricultural Management

Livestock and Poultry

Distribution of Farm Households Rearing Livestock (2020)

The livestock industry is one of the fastest-growing sectors in Korean agriculture. The proportion of specialized livestock farms, which derive most of their income from livestock raising, was roughly 5.7% in 2019. Therefore, there was no clear regional concentration of livestock farm households. However, a clear geographical association between the number of livestock farms and the distribution of large-scale specialized livestock farms has been observed. The large-scale and specialized livestock farms are closely associated, confirming their geographical concentration. In terms of the changes in the number of major livestock farms by breed size from 1985 to 2019, the number of large-scale livestock farms has increased, while the number of small-scale livestock farms has decreased. These changes can be explained by the fact that the level of enterprise and specialization in the Korean livestock industry gradually rises. The increase in the number of large-scale livestock farms is inevitably accompanied by an increase in environmental pollution by livestock farming. As a result, the restrictions on livestock farms’ location are enhanced. It is estimated that such changes caused the regional concentrations of livestock farms in Korea. In 2020, the proportion of livestock farms in regional total agricultural farms ranked by descending order was Inje-gun (15.6%), Sangju-gun (12.2%), Hongseong-gun (10.5%), Anseong-si (10.1%), and Yeongju-si (9.9%). The number of chickens ranked by descending order was Yeongju-si (6,500,000), Sangju-si (5,100,000), Hongseong-gun (4,360,000), Nonsan-si (9,240,000), and Jeonju-si (8,190,000). There are regional differences in the number of livestock farms: the number of livestock farms for Korean beef cattle and beef cattle in 2019 was the highest in Gyeongsangbuk-do; the number of livestock farms for chickens in 2020 was the highest in Gyeongsangnam-do; the number of livestock farms for pigs in 2020 was the highest in Chungbuk-do; the proportions of pigs ranked by descending order were Yeongju-si (6,500,000), Sangju-si (5,100,000), Hongseong-gun (4,360,000), Nonsan-si (9,240,000), and Jeonju-si (8,190,000).
The number of forestry households continues to decrease, like the number of farms and livestock households. In 2019, the number of individuals in forestry household was 79,420 people, compared with 253,656 people in 2010. The declining rate was about 29.7%. Moreover, considering the proportion of the forestry household population over 65 has increased continually. This is a need to prepare measures against the aging phenomena of the forestry household population.

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The maps of the number of forestry households by region and by types of forest production reveal the overall distribution of forestry in Korea. According to the number of forestry households by region, Gyeongbuk-do (263,334 households), Gyeongsangnam-do (14,673 households), Jeollanam-do (18,258 households), and Jeollabuk-do (11,017 households) have the highest number of forestry households. According to the number of forestry households by type of forest management, a cultivation household was the highest (59,717,357 households), followed by forest fire management (14,890,857 households), and the least (10,153 households).

The proportion of forest land area ranked by descending order was Jeju-do (89.9%), Sokcho-si (87.6%), and Uljin-gun (87.5%). And the total area of forestry production by regions was the highest in Gyeongbuk-do (about 1.2 trillion won), followed by Gangwon-do (about 1.1 trillion won), Jeollabuk-do (about 0.8 trillion won), Gyeongsangnam-do (about 0.6 trillion won), and Gyeongbuk-do (about 0.6 billion won).

The Korean fishing industry has experienced many uncertainties due to the depletion of fishing resources and imported fishing products over the last five decades. This decline is prominent in coastal and deep-sea fishing, which has traditionally been important to the Korean fishing industry. However, the total fishing industry output and value of production have improved slightly, with a gradual increase in aquaculture and inland water fishing facilities since 2000.

Fishing

The overall depression in the fishing industry has caused a persistent decline in the fishing household population and the number of fishing households. The fishing household population has decreased at an average annual rate of 6% over the past 40 years (1970–2019), and the proportion of people aged 65 years or over in the total fishing household population reached 29.2% in 2019. Similar to the change in the fishing/household population, the number of fishing households fell from about 59,800 households in 1970 to about 5,300 households in 2019. In terms of the changes in the number of fishing households by type of business, the decreasing rate of the number of part-time fishing households is higher than that of the number of full-time fishing households. As a result, the percentage of full-time fishing households is relatively high. It is estimated that such changes are linked to the growing number of fishing households that shifted to join the large-scale fishing industry centered on aquaculture after the 2000s. These changes, in some sense, have led to an increase in the size of fishing households and specialization of the fishing industry.