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Report Highlights:

The Korean government's policy incentivizing farmers to replace rice acreage with other crops is the driving force behind record low rice planting and production projected in marketing year (MY) 2024/25. On the other hand, MY 2024/25 wheat production, which benefits from the policy, is expected to reach the highest level since 1983. Korea is experiencing severe demographic changes, including the world's lowest fertility rate, which along with western eating habits will perpetuate trends of increased wheat and protein consumption and falling table rice demand. Market share of U.S. corn is on track to rebound in MY 2023/24 to close to 10 percent after it plummeted to 7 percent in MY 2022/23. An exceptionally high infusion of government rice reserves into the feed market in calendar year (CY) 2024 is expected to displace some imports of feed corn and feed wheat, and these two major feedstocks will continue to compete on their relative price spread.

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Executive Summary

Wheat

While not a traditional wheat producing country, Korea has gradually increased wheat acreage to meet growing demand as Korean consumer habits have shifted to a more westernized diet. Wheat production is forecast to reach a 40-year high in marketing year (MY) 2024/25, but that will be roughly half of the Korean government's long-term target to achieve a self-sufficiency rate of 5 percent by 2025. Post's wheat production estimate in MY 2023/24 was revised up from the previous report to 52,000 metric tons (MT) based on preliminary government statistics.

Total wheat consumption through MY 2024/25 is expected to grow only marginally, as Korea's declining population offsets increases in per capita consumption and rising exports of K-foods such as ramen noodles. Per capita consumption of milling wheat has been rising moderately by about 1 percent annually since 2015 and remained at 35.7 kg per person in Calendar Year (CY) 2023. This trend reflects growing consumer preferences for Western-style snacks and treats rather than rice-based meals. Feed wheat consumption, which fluctuates based on the price gap with corn, is expected to remain steady in MY 2023/24 and MY 2024/25.

Corn

Corn production is marginal in Korea and is expected to continue accounting for less than 1 percent of total consumption in MY 2024/25. Total corn consumption and imports vary mostly with changes in the relative price of feed wheat, corn's main substitute in compound feed production. In MY 2024/25, an exceptional 400,000 MT of government rice reserves are expected to replace some of the feed corn and feed wheat imports. Nonetheless, feed corn will continue as the dominant feed ingredient, accounting for more than 40 percent of overall compound feed production in Korea. The U.S. corn market share dipped to single digits in MY 2022/23 but is on pace to recover somewhat in MY 2023/24 if U.S. export sales remain strong through June 2024. However, U.S. corn is not expected to regain its previous position as Korea's dominant supplier because of continued price competition and local buyer's preferences for other origins, including South America.

Rice

Korea's MY 2024/25 rice production is forecast at 3.6 million metric tons (MMT) and is expected to be the first year on record that rice acreage will fall below 700,000 ha. The Korean government's policy to replace rice acreage with other crops has brought tangible outcomes and will continue to limit overall domestic rice production.

Per capita consumption of table rice in CY 2023 recorded another record low at 56.4 kg, down from 56.7 kg in the previous year. Westernized eating habits, particularly from the younger generation, are one of the key factors leading this trend. Given the rapid demographic changes accompanying the historically low fertility rate in Korea, this downward trend in table rice consumption is expected to continue. The government's initiative promoting the rice for processing industry has offset some portion of the decreased table rice consumption.

Wheat

Wheat Production

Post Seoul forecasts that MY 2024/25 (July 1-June 30) wheat production will reach 60,000 MT on moderately increased acreage, the highest production since 1983 and the fourth highest ever recorded since Korea Statistics officially started tracking domestic wheat production. Recent trends of increased wheat production and planted area are in line with the government's policies to substitute rice acreage for other crops. However, the expected wheat production levels are still behind the government's target of 120,000 MT in 2025 needed to secure a 5-percent self-sufficiency rate. Specifically for wheat, the government has set a long-term target to increase the self-sufficiency rate of food use milling wheat to 5 percent by 2025 and 10 percent by 2030. According to preliminary estimates, domestically produced wheat was only 2 percent of food use consumption in CY 2023.

In February 2024, the Ministry of Agriculture, Food, and Rural Affairs (MAFRA) announced its plan to support domestic wheat production through increased government purchases, which are expected to be 25,000 MT in CY 2024, up from 19,000 MT in CY 2023 ("Announcement of the 2024 plan to foster the domestic wheat industry," in Korean). Since the Wheat Industry Development Basic Plan was enacted in November 2021, MAFRA has formulated annual implementation plans.

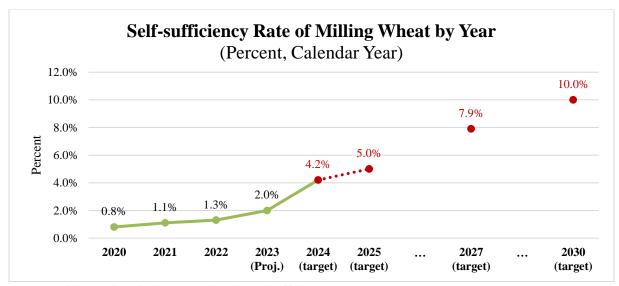
Wheat production in MY 2023/24 significantly increased to 52,000 MT, the highest level since 1983, primarily due to increased government direct grants for switching rice production acreage to wheat.

Wheat Production and Yield (Metric tons, Marketing Year) Government's Production Target by 2025 140,000 4,500 Area(ha), Production(MT) 120,000 4,000 100,000 3,500 80,000 60,000 3,000 40,000 2,500 20,000 2,000 M 2023/24 MY 202123 MY 2024/25 W. 505051 Production (MT)

Figure 1

Source: Ministry of Agriculture, Food, and Rural Affairs (MAFRA), Statistics Korea (KOSTAT) Note: Production in MY 2025/26 is based on the government's target. MY 2023/24 and MY 2024/25 are FAS estimates and forecasts, respectively.

Figure 2

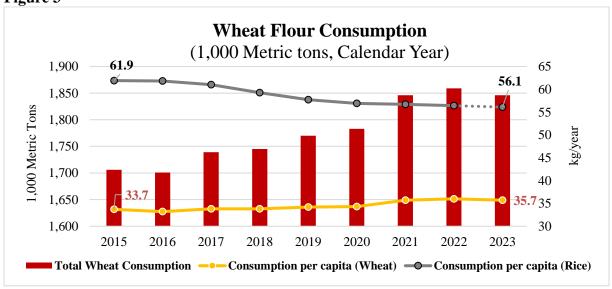


Source: Ministry of Agriculture, Food and Rural Affairs (MAFRA) Note: 2023 data is based on the preliminary data from MAFRA

Wheat Consumption

Post Seoul forecasts total wheat consumption in MY 2024/25 will stay flat at about 4.2 MMT, close to the 3-year average. While per capita food wheat consumption has been increasing, this trend has been partially offset by a declining overall population. Total consumption of wheat differs by year mainly from fluctuations in feed wheat consumption, which varies annually depending on the relative price of its substitute, feed corn.

Figure 3



Sources: Korea Flour Mills Industrial Association; Ministry of Agriculture, Food and Rural Affairs Note: Per capita consumption for rice in CY 2023 is estimated reflecting the past years' declining trend.

Milling Wheat

Demand for wheat-based foods has driven per capita consumption of food, seed, and industrial (FSI) wheat to gradually increase by about 1 percent annually over the past 10 years. Strong milling wheat demand stems from a growing preference for western-style snacks and treats that can be consumed quickly on the go, such as bread and pastries, rather than traditional Korean rice-based meals. Per capita consumption of FSI wheat remained flat at about 56 kg from CY 2022 to CY 2023, but it is expected to grow in coming years reflecting long-term shifts in consumer preferences and the continued decline in rice consumption.

Moreover, an increase in exports of instant noodles (ramen) is likely to contribute to increased milling wheat consumption in the food processing sector. Wheat flour consumption for noodles accounts for 75 percent of the total wheat flour production in Korea (Figure 5). In January 2024, local news outlets reported that exports of Korean ramen reached a record \$952 million in 2023, benefited by increased global awareness of Korean food through the global popularity of Korean culture.

According to MAFRA's yearbook on agricultural crop supply and demand, there are nine milling companies in Korea with an estimated total annual milling capacity of 3.5 MMT (Table 6), which implies that local milling capacity is enough to support increased milling wheat demand.

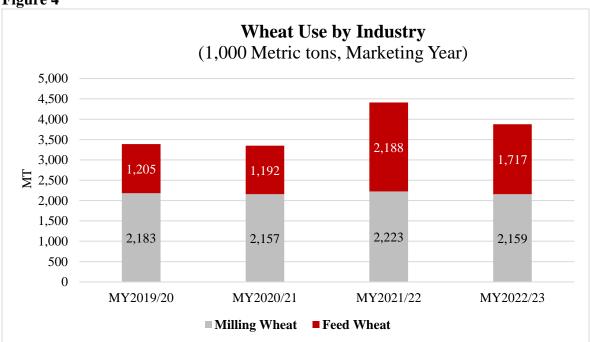


Figure 4

Sources: Korea Feed Association (KFA), Korea Flour Mills Industrial Association (KOFMIA) Note: Milling wheat use excludes the domestic production of wheat, imported pasta and wheat flour.

Wheat Flour Production for Food Use by Type (1,000 Metric Tons) 2,000 1,800 1,600 1,400 1,200 1,000 800 75% 74% 75% 74% 74% 73% 600 400 200 0 2010 2011 2012 2013 2014 2015 2016 2017 2019 2020 2021 2022 For All Purpose (incl. Noodle) For Bread (Hard) For Cake (Soft)

Figure 5

Source: Korea Flour Mills Industrial Association (KOFMIA)

Feed Wheat

In MY 2024/25, FAS/Seoul forecasts that feed wheat consumption will remain flat at around 1.8 MMT. The current import price differential of feed wheat over feed corn has remained stable between \$10-20/MT since May 2023. Therefore, the relative consumption ratio between feed corn and feed wheat is expected to remain at a similar level to MY 2023/24 (Table 7). Feed wheat consumption in MY 2022/23 was revised to 1.8 MMT based on revisions to preliminary data provided by the Korea Feed Association (KFA).

Wheat Trade

Post Seoul forecasts total MY 2024/25 wheat imports will remain flat at around 4.6 MMT (including flour and pasta imports on a wheat equivalent basis), reflecting a slight decrease from the current year but close to a 3-year-average level in feed wheat demand and a moderate increase in demand for milling wheat. Feed wheat imports are expected to decline on competitive corn prices and the recently announced government release of feed rice stocks of 400,000 MT in CY 2024 (see Rice section), whereas milling wheat imports reflect the long-term westernized diet trend of wheat-based foods replacing traditional rice consumption.

Feed and milling wheat imports for MY 2023/24 are forecast up slightly from the prior year. According to KFA, accumulated secured purchases of feed wheat from Korean buyers already reached 1.7 MMT as of the beginning of March 2024. However, the current marketing year's

feed wheat imports will not be as high as MY 2021/22, when the price of feed wheat was especially competitive.

Milling Wheat

Post Seoul forecasts MY 2024/25 milling wheat imports will be slightly up by 1 percent reflecting the westernized diet substituting traditional rice consumption. Korean buyers have been sourcing milling wheat from the United States, Australia, and Canada for a long time due to the consistent value and quality reputation of those origins. In particular, customer preferences in the baking and food processing sector correspond to specific types of wheat for different end products such as cakes, bread, and noodles.

Table 1
Imports of Milling Wheat by Country

imports of Mining Wheat by Country										
Imports of Milling Wheat by Country										
(Metric Ton, Marketing Year)										
Country	Total Jul. to Jan.									
Country	MY 2021/22	MY 2022/23	Change	MY 2022/23	MY 2023/24	Change				
United States	1,178,095	1,161,518	-16,577	675,259	701,175	25,916				
(Percent of)	46	44	-2p	42	46	+4p				
Australia	1,148,680	1,244,283	95,603	782,287	697,203	-85,084				
Canada	223,827	226,519	2,692	145,152	134,656	-10,496				
Others	7,924	7,924	0	2,816	2,554	-262				
World	2,558,526	2,640,244	81,718	1,605,514	1,535,588	-69,926				

Source: Korea Customs Service (KCS)

Feed Wheat

Generally, feed wheat and corn are substitute products, with shares trading off based on price competitiveness in the Korean compound feed market. Considering that the current price spread between feed wheat and corn is attractive enough for buyers to continue sourcing imported feed wheat, FAS/Seoul expects there will still be stable demand in line with the 3-year-average into MY 2024/25. However, it will be slightly below the current marketing year, where the accumulated purchase pace of feed wheat from local industries has exceeded normal years.

When it comes to the country of origin, feed wheat imports from Eastern Europe (Ukraine and Romania) dropped precipitously in MY 2022/23, displaced by exceptionally ample Australian feed wheat supplies. While there are still strong Australian feed wheat imports in the first half of MY 2023/24, it is expected that buyers will return to traditional suppliers in Eastern Europe. Based on import data from July 2023 to January 2024, Ukraine's feed wheat exports to Korea have recovered significantly despite the ongoing Russian invasion and Ukraine remains the No. 3 exporter of feed wheat to Korea following Australia and Bulgaria.

Table 2
Imports of Feed Wheat by Country

	imports of recurry country									
Imports of Feed Wheat by Country										
(Metric Ton, Marketing Year)										
Country		Total			Jul. to Jan.					
Country	MY 2021/22	MY 2022/23	Change	MY 2022/23	MY 2023/24	Change				
Bulgaria	491,876	52,317	-439,559	52,317	344,692	292,375				
Australia	382,648	1,162,601	779,953	383,635	411,637	28,002				
Ukraine	389,101	74,691	-314,410	70,756	180,020	109,264				
(Percent of)	17	4	-12p	8	14	+6p				
Romania	346,140	0	-346,140	0	131,110	131,110				
United States	121,134	64,688	-56,446	46,721	1,586	-45,135				
Russia	66,270	64,502	-1,768	27,222	49,896	22,674				
Others	539,680	263,852	-275,828	262,933	171,268	-91,665				

Source: Korea Customs Service (KCS)

Flour Trade

Post Seoul forecasts that wheat flour imports will remain flat, but pasta imports will increase primarily from consumer preferences for imported pasta used in a diverse range of western cuisine. Exports of Korean manufactured wheat flour and pasta are expected to moderately increase due to the popularity of Korean culture and cuisine. Key export markets for Korean pasta include China, the United States, Japan, and the Netherlands.

Table 3
Korea's Pasta Exports by Country

Korca s rasta Exports by Country											
Pasta Exports by Country (H.S.: 190219, 190230, 190240)											
(Metric Ton, Marketing Year)											
		Quantity		S	Share (Percent)					
	MY	MY	MY	MY	MY	MY					
Country	2021/22	2022/23	2023/24	2021/22	2022/23	2023/24					
·	Jul. to Jun.	Jul. to Jun.	Jul. to Jan.	Jul. to Jun.	Jul. to Jun.	Jul. to Jan.					
	Jui. to Juii.	Jui. to Juii.	(7 months)	Jui. to Juii.	Jui. to Juii.	(7 months)					
China	60,372	59,946	42,182	22	21	23					
United States	48,448	45,725	27,291	18	16	15					
Japan	21,513	23,070	12,955	8	8	7					
Netherlands	8,202	14,517	11,057	3	5	6					
Others	137,696	144,809	92,140	50	50	50					
Total	276,231	288,067	185,625	100	100	100					
Total (Wheat Basis ^{1/})	377,884	394,076	253,935	N/A	N/A	N/A					

Source: Korea Customs Service (KCS) 1/ applied conversion factor: 1.368

Tariffs

In late December 2023, the Ministry of Economy and Finance (MOEF) released the adjusted tariffs and autonomous tariff rate quota (TRQ) schedule for CY 2024. Once again, MOEF excluded milling wheat from the list of autonomous TRQs, leaving all milling wheat to be charged the out-of-quota duty rate of 1.8 percent. By comparison, the feed wheat TRQ and corresponding duty were eliminated in 2007. However, under the United States-Korea Free Trade Agreement (KORUS), import tariffs on all U.S. wheat, both milling and feed wheat, are zero. In addition to the United States, major wheat suppliers Canada, Australia, and the European Union also enjoy duty-free access through their free trade agreements with Korea.

The base tariff rate on wheat flour is 3 percent. Under KORUS, import tariffs on U.S. wheat flour (H.S. 1101.00.1000) were phased out over a five-year period, reaching zero in 2016. Tariffs under KORUS for meslin flour (H.S. 1101.00.2000), a mixture of rye and wheat flour, immediately fell to zero in 2012.

Table 4
Tariff Rate for Wheat Products

Tariff Rate for Wheat Frouncis												
Base Tariff and Applied Tariff Rate for Wheat												
(Percent, As of CY 2024)												
			Autonomous	WTO TRQ		NODIIC						
Commodity	H.S. Code	Base	Autonomous TRQ	In- quota	Out-of- quota	KORUS FTA						
Durum Wheat, Seed	1001.11.0000											
Durum Wheat, Other	1001.19.0000	3		Ģ)							
Seed, Meslins	1001.91.1000											
Seed, Other	1001.91.9000	1.8		1	.8							
Feeding, Meslins	1001.99.1010	3	N/A	Ģ)	0						
Feeding, Other	1001.99.1090	0	IN/A	1	.8	U						
Milling, Meslins	1001.99.2010	3		Ģ)							
Milling, Other	1001.99.2090	1.8		1	.8							
Others, Meslins	1001.99.9010	3		Ģ)							
Others, Other	1001.99.9090	1.8		1	.8							
Wheat Flour	1101.00.1000	3		4	.2							

Source: Customs Law Information Portal (CLIP) under Korea Customs

Note: If separate in-quota/out-of-quota duty rates are specified for an item under the WTO TRQ, then they take precedence over other duty rates except the autonomous TRQ and FTA preferential duty rates. Otherwise, the lowest tariff rate will be prioritized. Only designated government entities for each item have authorization to apply in-quota rates under WTO TRQs. Autonomous rate tariffs are flexibly determined by the government based on domestic market conditions, such as the need to facilitate imports to ensure supplies, to stabilize domestic prices, or to correct imbalances in tax rates among similar products. Autonomous TRQs take precedence over WTO TRQs.

Table 5
Production, Supply and Distribution

Wheat	2022/2023		2023	/2024	2024	/2025
Market Year Begins	Jul	2022	Jul	Jul 2023		2024
Korea, Republic of	USDA Official	New Post New Post		New Post	USDA Official	New Post
Area Harvested (1000 HA)	8	8	12	12	0	14
Beginning Stocks (1000 MT)	1582	1582	1618	1600	0	1582
Production (1000 MT)	35	35	52	52	0	60
MY Imports (1000 MT)	4533	4531	4700	4650	0	4650
Total Supply (1000 MT)	6150	6148	6370	6302	0	6292
MY Exports (1000 MT)	430	430	450	450	0	470
Feed and Residual (1000 MT)	1699	1717	1800	1820	0	1780
FSI Consumption (1000 MT)	2403	2401	2450	2450	0	2460
Total Consumption (1000 MT)	4102	4118	4250	4270	0	4240
Ending Stocks (1000 MT)	1618	1600	1670	1582	0	1582
Total Distribution (1000 MT)	6150	6148	6370	6302	0	6292
Yield (MT/HA)	4.375	4.375	4.3333	4.3333	0	4.2857
(1000 TTA) (1000 NEE) (NEETTA						-

(1000 HA),(1000 MT),(MT/HA)

MY = Marketing Year, begins with the month listed at the top of each column

Note: Official USDA data is based on the March 2024 WASDE data

Appendix

Table 6 Domestic Wheat Milling Capacity

Samyang Flour Mills CO., Ltd.

Total (9 Companies / 12 Milling Facilities)

Company	Milling (Capacity	Location
Company	per day	Annual	Location
Daehan Flour Mills Co., Ltd.	2,460	738,000	Incheon
CJ CheilJedang	1,120	336,000	Seoul
Samhwa Flour Mills	430	129,000	Incheon
Sajo (Dong-a-one)	1,226	367,800	Dangjin
Daesun Flour Mills Co., Ltd.	600	180,000	Asan
Samyang	1,180	354,000	Asan
SPC Samlip	1,000	300,000	Sejong
Daehan Flour Mills Co., Ltd.	530	159,000	Busan
Sajo (Dong-a-one)	900	270,000	Busan
CJ CheilJedang	1,400	420,000	Yangsan
Hantop Inc.	440	132,000	Busan

250

11,536

75,000

3,460,800

Wonju

Milling Wheat Production Capacity (Metric Tons, as of CY 2023)

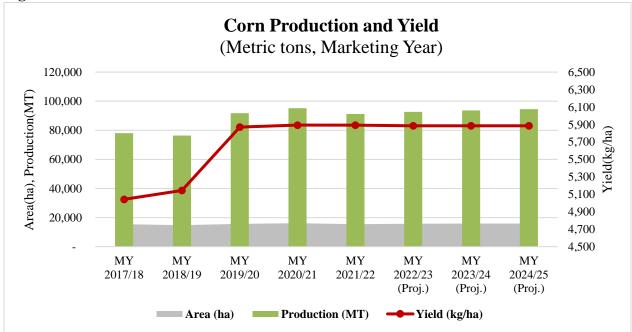
Source: MAFRA 2023 yearbook on agricultural crops supply and demand. Annual capacity is based on 300 days.

Corn

Corn Production

Post Seoul forecasts MY 2024/25 (October 1-September 30) corn production up slightly at 95,000 MT on expanded planted area. Corn production is minimal in Korea and accounts for less than 1 percent of total consumption. While corn is one of the alternative crops being promoted under the government's rice substitution policy, the expansion of corn production is expected to remain slow with a limited annual growth rate of 1 percent in MY 2024/25. Compared to other alternative crops incentivized by the program, farmers and industry buyers have limited interest in boosting domestic corn production.





Source: Ministry of Agriculture, Food, and Rural Affairs (MAFRA), Statistics Korea (KOSTAT)

Note: MY 2022/23 through MY 2024/25 are FAS/Seoul forecasts based on 3-year-average acreages and yields

Corn Consumption

Post Seoul forecasts that MY 2024/25 corn consumption will to remain similar to the prior year's level at about 11.4 MMT. Korea's total corn consumption is highly affected by changes in feed corn usage, with food, seed, and industrial (FSI) consumption being relatively stable at 2.3 MMT and 20 percent of total consumption.

Feed corn consumption is driven by two important factors: the livestock inventory and the relative price competitiveness of feed wheat. The current year's increased inventory of poultry (Table 13) and the price competitiveness of feed corn compared to feed wheat (Figure 7) would normally increase feed corn demand. However, the Korean feed market is anticipating an abnormally high government rice stock release of 400,000 MT in CY 2024, which will capture a portion of feed corn demand.

In MY 2021/22, when feed corn prices spiked extremely high and became more expensive than feed wheat, feed corn consumption fell below 9 MMT (Table 7). In contrast, the estimated import price of feed corn is \$20/MT lower than feed wheat so far in MY 2023/24. Considering both import records for the first 4 months through January 2024 and the expected imports by May 2024 according to secured purchases by KFA, corn appears to have benefited from a positive price outlook, suggesting a return to past years' usage ratio of feed wheat and feed corn.

Regarding the total size of the feed market, compound feed consumption has been flat at 21 MMT annually, with feed corn maintaining a 43 percent share of compound feed ingredients and distillers dried grains and solubles (DDGS) at 5 percent of the overall composition. The quarterly livestock inventory announced by MAFRA in December 2023 showed that the poultry inventory increased from the previous year, while swine remained flat. Korea's chicken meat production is expected to continue increasing in the coming months, in line with industry plans and the end of a limited domestic highly pathogenic avian influenza (HPAI) outbreak.

Table 7
Import Changes of Feed Corn and Feed Wheat by Price by Year

Marketing Year	Import Price Spread	September)		
Tear	(Corn-Wheat)	Corn	Corn Portion (Percent)	Wheat
2020/21	-10.0	9,432	87.5	1,351
2021/22	+23.3	8,989	80.4	2,189
2022/23	-23.6	9,279	83.8	1,797
2023/24	-19.9	9,000	83.2	1,820

Source: Korea Customs

Note: Price is based on cost, insurance and freight (CIF) at destination ports in Korea

Table 8
Compound Feed Production by Species

	Compound Feed Production by Species											
	(1,000 Metric Tons, Marketing Year)											
Species/Year 2019 2020 2021 2022 2023												
Poultry	6,196	6,260	6,014	6,114	6,102							
Swine	6,850	6,921	6,932	7,032	7,080							
Cattle	5,979	6,258	6,615	6,884	6,965							
Others	1,510	1,527	1,367	1,383	1,345							
Total	20,536	20,966	20,929	21,414	21,493							

Source: Ministry of Agriculture, Food, and Rural Affairs (MAFRA)

Note: Above are production numbers, which may differ from the usage number

Table 9 Feed Ingredients Use for Compound Feed Production

Feed Ingredients Use for Compound Feed Production

(1,000 Metric Tons, October to September)

Items	MY 20	20/21	MY 20	21/22	MY 2022/23	
Items	Quantity	Percent	Quantity	Percent	Quantity	Percent
Total Grains and Grain Substitution	13,364	64.2	13,725	63.9	13,512	63.1
- Wheat	1,351	6.5	2,189	10.2	1,797	8.4
- Corn	9,432	45.3	8,989	41.9	9,279	43.3
- Others	2,581	12.4	2,547	11.9	2,435	11.4
Total Vegetable Protein	5,211	25.1	5,779	26.9	5,479	25.6
- Soybean Meal	2,310	11.1	2,249	10.5	2,023	9.4
- Rapeseed Meal	401	1.9	306	1.4	515	2.4
- Palm Kernel Meal	912	4.4	953	4.4	1,008	4.7
- Sesame Meal	44	0.2	48	0.2	44	0.2
- Perilla seed Meal	2	0.0	2	0.0	2	0.0
- DDGS	1,056	5.1	1,070	5.0	1,093	5.1
- Others	487	2.3	1,151	5.4	794	3.7
Total Animal Protein	214	1.0	217	1.0	211	1.0
- Fish meal	9	0.0	9	0.0	9	0.0
- Others	204	1.0	208	1.0	202	0.9
Total Others	2,013	9.7	1,749	8.1	2,216	10.3
Grand Total	20,803	100.0	21,470	100.0	21,418	100.0

Source: Korea Feed Association (KFA)

Note: MY 2021/22 and MY 2022/23 data were revised from preliminary data in the 2023 Oilseeds Annual report.

Corn for Processing

Korean corn processors use genetically engineered (GE) corn, non-biotech identity preserved (IP) corn, and conventional (non-GE) corn to produce corn starch, high fructose corn syrup (HFCS), and corn flour. In processing, GE corn is used for starch production for industrial purposes such as paper sizing and glue. Non-GE IP corn and conventional corn are used for food use corn starch and corn flour. The perceived public concern over biotechnology continues to influence imported processing corn decisions, especially for corn used in production intended for human consumption (such as HFCS and corn oil). Many food processing companies are reluctant to use ingredients derived from biotech corn to avoid these perceived public concerns.

In February 2024, major news outlets reported that LG Chem signed a Heads of Agreement (HOA) with CJ CheilJedang establishing a joint venture to produce bio-based nylon, an eco-friendly alternative to traditional synthetic polymers derived from fossil fuels. CJ CheilJedang plans to provide LG Chem with the ingredient pentamethylenediamine (PMDA) produced from lysine derived from corn and sugarcane. Demand for bio-based nylon end products is increasing

globally, but especially in Korea's powerhouse automotive and home appliance industries. Once commercial production begins in a few years, industrial corn consumption may increase.

Import Price of Corn and Wheat (for Feed) (CIF Korea, U.S. Dollar per Metric Ton) 450 80 400 Spread (Corn-Wheat) 60 350 CIF Price (\$/MT) 40 300 20 250 200 0 150 Corn benefits from price competitiveness -20 100 -40 50 -60 Spread (Corn-Wheat) Corn for Feed Wheat for Feed

Figure 7

Source: Korea Customs Service (KCS)

Note: Price from February to May 2024 is based on the secured contracts reported by KFA.

Corn Trade

Post Seoul forecasts that total MY 2024/25 imports will remain at around 11.3 MMT which is close to normal years. Based on export sales data for the first half of MY 2023/24, U.S. corn exports to Korea are expected to recover to near MY 2021/22 levels. Exports of U.S. corn to Korea have plummeted in recent years and recorded about 7 percent market share in MY 2022/23 among total corn imports due to price competition from alternative suppliers. While it will be difficult for the United States to recover its historic position as the dominant corn supplier in Korea, current marketing year exports are on pace to regain market share close to 10 percent.

It is noteworthy that some contracts for processing corn from the United States have been fulfilled so far in MY 2023/24 because U.S. processing corn exports were almost halted following a detection of malathion residue in excess of the import tolerance in 2022. Since the Korean government introduced a positive list system (PLS) for pesticide residues in 2019, stricter maximum residue limits (MRLs) have been applied for many imported products. In August 2023, the Ministry of Food and Drug Safety (MFDS) finally approved an increase to the import tolerance of malathion from 0.03 ppm to 0.2 ppm.

In recent years, Korea has relied on South America for its feed corn supply. Brazil and Argentina together generally account for more than 80 percent of total feed corn imports, with annual variation based primarily on price differences. While there was a decrease in imports from

Argentina due to low export availability in MY 2022/23, the total feed corn supply to Korea was maintained by other suppliers, such as Brazil, Eastern Europe, Paraguay, and South Africa.

Buyer preference for lower ratios of broken corn and foreign material (BCFM) has continued to favor South American corn, but this factor is secondary to price. Market share of U.S. corn suffered especially because of price competition and quality concerns related to BCFM, falling to a record low of 9 percent of feed corn imports in MY 2022/23. According to KFA, BCFM test results in Korean destination ports registered higher than South American corn, discouraging buyers from purchasing more U.S. feed corn at higher prices than other origins. Although U.S. suppliers met the quality requirements upon loading, the quality tests conducted at destination ports in Korea showed a discrepancy due to breakage during long-distance voyages.

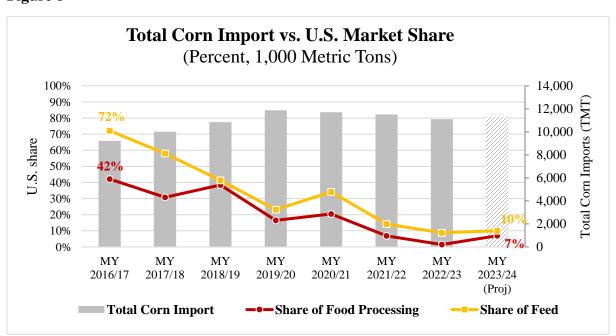


Figure 8

Source: Korea Customs Service (KCS)

Note: Total imports and U.S. share in MY 2023/24 are based on FAS/Seoul projection.

Tariffs

In late December 2023, the Ministry of Economy and Finance (MOEF) released the adjusted tariffs and autonomous tariff rate quotas (TRQs) for 2024. The autonomous TRQs cover a variety of agricultural products, including corn and DDGS. The TRQ for feed corn was set at 11 MMT with zero duty for 2024. The TRQ for processing corn was decreased to 2.1 MMT from 2.15 MMT in the previous year.

The out-of-quota duty for both feed and processing corn remained fixed at 328 percent. Please refer to the GAIN report 2024 Korea's Adjustment and Quota Tariffs Schedule for more details.

Of the annual autonomous TRQ for feed corn, 11 MMT has been allocated to feed millers who are KFA members and to the national farmer's cooperative, Nonghyup Feed Inc. Meanwhile, the Korea Corn Processing Industry Association (KOCPIA) manages the majority of the 2.1 MMT TRQ for processing corn.

Under the KORUS FTA, the duty on U.S. feed corn immediately fell to zero in 2012. If imports of U.S. corn claim the KORUS preferential duty, those imports do not count against the global autonomous TRQ of 11 MMT. Since 2019, tariffs were completely phased out on U.S. corn for food processing, and the duty fell to zero.

Table 10
Total Corn Imports by Country

Total Corn Imports by Country												
	Total Corn Imports by Type by Country											
(1,000 Metric Tons)												
		Proce	essing			F	eed					
Country	MY 20	022/23	MY 2023/24	Change	MY 2022/23		MY 2023/24	Change				
	Total	Oct. to Jan.	Oct. to Jan.	(Oct. to Jan.)	Total	Oct. to Jan.	Oct. to Jan.	(Oct. to Jan.)				
Brazil	251	251	185	-66	2,769	941	1,447	506				
Romania	275	90	275	184	539	1	28	27				
USA	30	7	8	1	795	9	0	-9				
(Percent of Total)	(1.5)	(0.8)	(1.1)	+0.2p	(8.8)	(0.3)	(0.0)	-0.3p				
Serbia	10	10	69	59	9	0	0	0				
South Africa	53	0	51	51	392	2	68	66				
Argentina	0	0	0	0	3,259	1,956	1,595	-361				
Others	99	37	70	33	567	322	257	-65				
Sub Total	719	395	656	261	8,330	3,231	3,397	165				
Ukraine	1,208	492	101	-391	680	97	17	-80				
Russia	132	0	15	15	30	1	11	10				
Sub Total	1,340	492	115	-376	710	97	27	-70				
Total	2,059	887	772	-115	9,040	3,329	3,424	95				

Source: Korea Customs Service (KCS)

Table 11

Tubic II											
Base Tariff and Applied Tariff Rate for CY 2024 (Percent, As of CY 2024)											
Commodity	H.S. Code	H.S. Code Base Autonomous TRQ		H.S. Code Base		TO TRQ	KORUS FTA				
			TKQ	In quota	Out-of-quota	TIA					
Feed Corn	1005.90.1000	3	0 (11 MMT)	1.8	328						
Processing Corn	1005.90.9000	3	0 (2.1 MMT)	1.0	326	0					
DDGS	2303.30.1000	2	0 (70,000 MT)	6.6							

Source: Customs Law Information Portal (CLIP) under Korea Customs

Note: If separate in-quota/ out-of-quota duty rates are specified for an item under the WTO TRQ, then they take precedence over other duty rates, except the autonomous TRQ and FTA preferential duty rates. Otherwise, the lowest tariff rate will be prioritized. Only designated government entities for each item have authorization to apply in-quota rates under WTO TRQs. Autonomous rate tariffs are flexibly determined by the government based on domestic market conditions, such as the need to facilitate imports to ensure supplies, stabilize domestic prices, or to correct imbalances in tax rates among similar products. Autonomous TRQs take precedence over WTO TRQs.

Table 12 Production, Supply and Distribution: Corn

Corn	2022	/2023	2023	3/2024	2024	/2025	
Market Year Begins	Oct	2022 Oct 20		2023	Oct	Oct 2024	
Korea, Republic of	USDA Official	New Post	USDA Official	New Post	USDA Official	New Post	
Area Harvested (1000 HA)	16	16	16	16	0	16	
Beginning Stocks (1000 MT)	2056	2056	1897	1858	0	1992	
Production (1000 MT)	92	93	91	94	0	95	
MY Imports (1000 MT)	11099	11099	11600	11300	0	11300	
Total Supply (1000 MT)	13247	13248	13588	13252	0	13387	
MY Exports (1000 MT)	0	0	0	0	0	0	
Feed and Residual (1000 MT)	9000	9279	9300	9000	0	9140	
FSI Consumption (1000 MT)	2350	2111	2350	2260	0	2260	
Total Consumption (1000 MT)	11350	11390	11650	11260	0	11400	
Ending Stocks (1000 MT)	1897	1858	1938	1992	0	1987	
Total Distribution (1000 MT)	13247	13248	13588	13252	0	13387	
Yield (MT/HA)	5.75	5.8125	5.6875	5.875	0	5.9375	

(1000 HA), (1000 MT), (MT/HA)

MY = Marketing Year, begins with the month listed at the top of each column

Note: Official USDA data is based on the March 2024 WASDE data

Table 13 Livestock Inventory by Quarter

Livestock Inventory Livestock Inventory								
		(1,000 Head, 1,	•					
	1	(1,000 Head, 1,						
Animal	Year	March	June	September	December			
Beef Cattle	2020	3,197	3,383	3,435	3,395			
	2021	3,374	3,568	3,623	3,589			
	2022	3,558	3,734	3,752	3,694			
	2023	3,749	3,749	3,753	3,620			
Dairy Cattle	2020	409	406	408	410			
	2021	406	400	400	401			
	2022	397	388	390	390			
	2023	385	383	386	387			
Swine	2020	11,208	11,088	11,365	11,078			
	2021	11,147	11,150	11,465	11,217			
	2022	11,169	11,166	11,326	11,124			
	2023	11,111	11,108	11,398	11,089			
Layers	2020	72,811	74,921	73,853	72,580			
	2021	62,110	65,871	70,722	72,612			
	2022	70,428	73,073	75,863	74,188			
	2023	73,684	75,189	76,126	77,202			
Broilers	2020	96,350	110,842	88,203	94,835			
	2021	96,361	109,720	83,699	93,604			
	2022	89,990	106,254	89,463	88,713			
	2023	88,852	110,869	89,854	94,115			

Source: Korea Statistics (KOSTAT)

Note: The above number is as of the 1st of the month

Table 14 Monthly Processing Corn Use

Monthly Processing Corn Use										
Monthly Processing Corn Use by Milling Type										
(Metric Tons, Marketing Year)										
		MY 2022/23			MY 2023/24					
	Wet Milling	Dry Milling	Total	Wet Milling	Dry Milling	Total				
October	166,977	5,451	172,427	169,621	6,732	176,353				
November	161,967	5,287	167,254	169,848	6,763	176,611				
December	156,779	5,357	162,136	170,739	6,006	176,745				
January	154,328	5,342	159,670	169,643	6,090	175,733				
February	150,620	5,275	155,895	N/A	N/A	N/A				
March	160,788	5,415	166,203	N/A	N/A	N/A				
April	159,359	4,984	164,343	N/A	N/A	N/A				
May	166,626	5,178	171,804	N/A	N/A	N/A				
June	164,776	5,863	170,639	N/A	N/A	N/A				
July	170,130	5,129	175,259	N/A	N/A	N/A				
August	164,525	5,426	169,951	N/A	N/A	N/A				
September	162,130	5,456	167,586	N/A	N/A	N/A				
Total	1,939,005	64,162	2,003,167	N/A	N/A	N/A				

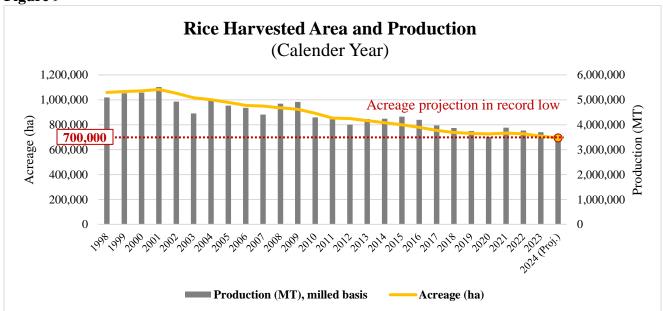
Source: Korea Corn Processing Industry Association (KOCPIA)

Milled Rice

Rice Production

Post Seoul forecasts MY 2024/25 (November 1-October 30) rice production will be continuously down at 3.6 MMT on reduced planted area. Based on a nationwide survey conducted in March 2024 by the Korea Rural Economic Institute (KREI), MY 2024/25 is expected to be the first year on record that rice acreage will fall below 700,000 ha. The Korean government introduced several proactive government-oriented policies encouraging farmers to substitute rice with alternative crops and these have been effective in curbing rice acreage. For more information, please refer to FAS/Seoul's <u>Grain and Feed Update</u> published in January 2024.

Figure 9



Source: Ministry of Agriculture, Food, and Rural Affairs (MAFRA), Projection of CY2024 is based on the KREI estimates

Table 15
Rice Production Forecast for MY 2024/25

2024 Rice Production Forecast							
	(Milled Basis)						
MY2023/24 MY2024/25 (Proj.) ^{1/} Change from M 2023/24							
Area (1,000 ha)	708	694	-2.0%				
Yield (kg/ha)	5,229	5,180	-0.9%				
Production (1,000MT)	3,702	3,595	-2.9%				

1/ Based on KREI Survey for March 8-14, 2024

Rice Consumption

Per capita consumption of table rice has been declining rapidly, down to 56.4kg in CY 2023 from above 80 kg in CY 2005. Rice consumption also dropped below annual per capita consumption of three major meats (beef, pork, and chicken), which totaled 60.6 kg in CY 2023. Further declines in per capita rice consumption are likely due to several demographic and cultural trends. Younger generations prefer alternative meals following westernized eating habits, as do the increasing numbers of double-income households. With Korea's low fertility rate, which fell to a record low of 0.72 in CY 2023 from 0.78 in CY 2022, single and two-person households make up the majority of modern households and traditional rice-centered family meals are becoming less common.

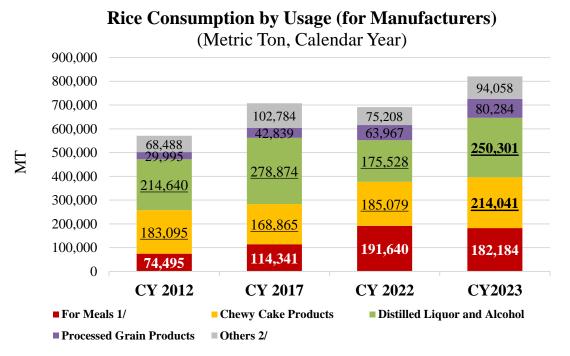
According to the 2022 National Health and Nutrition Survey published earlier this year by the Korea Disease Control and Prevention Agency (KDCA), the percentage of Koreans skipping breakfast in CY 2022 rose again to 34 percent, from about 32 percent in CY 2021. More importantly, 59 percent of respondents in the 19-29 age group reported skipping breakfast at the time of the survey, up from 53 percent the previous year. The Korean government announced that it will increase funding for the '1,000 Korean Won (\$0.8) Breakfast' program, a subsidy providing traditional Korean breakfast (rice bowl, soup, and sides) to university students. The program budget will double starting in CY 2024 to reach a total of 4.5 million students at 186 universities, up from 2.3 million students at 142 universities in CY 2023. A survey of 5,711 university students in CY 2023 showed that more than 90 percent of recipients said the program helped them recognize the importance of having breakfast, but additional time will be needed for the program to generate a tangible turnover in rice consumption.

Figure 10

Source: Ministry of Agriculture, Food, and Rural Affairs (MAFRA)

Amidst the overall trend of declining rice consumption, there has been some growth in rice for food and beverage processing. According to Statistics Korea's 2023 rice consumption survey by sector, two sectors – alcoholic beverages and rice cake products – showed a significant increase in consumption of rice for processing compared to the prior year (Figure 11). The increase in liquor and alcohol consumption was attributed to the government's release of old crop rice stocks; rice cake product consumption increased as group events resumed after the lifting of COVID-19 restrictions. Post Seoul expects that consumption of rice for processing will continue to increase in the future, partially offsetting the decline in table rice consumption.

Figure 11



1/ includes lunchbox, HMR, and retort food

2/ includes traditional pastes, confectionery, noodle and starch usages

Source: Statistics Korea (KOSTAT)

The increased demand in rice for processing is also in line with MAFRA's <u>recently announced Third Basic Plan</u> boost domestic rice consumption through support for the rice processing industry. To achieve its target of 17 trillion Korean won (U.S. \$12.6 billion) in domestic sales and \$400 million in exports of processed rice food by 2028, MAFRA will support ten major promising rice products such as preserved rice (heat-to-serve) and spicy stir-fried rice cakes (*tteokbokki*) through research and development and market expansion strategies. Overall, MAFRA hopes to generate demand for an additional 150,000 MT of rice from 2022 to 2028.

The feed industry has also benefited from a recent government announcement supporting rice consumption. In late December 2023, MAFRA announced that it would release an additional 400,000 MT of rice to the feed sector in CY 2024 to overcome the government's overstock of rice. The projected increase of rice for feed is likely to directly impact the demand for imported feed corn for two straight years, in both MY 2023/24 and MY 2024/25. The government's

decision was motivated by its goal to reduce rice stocks, which had risen significantly above target levels. However, since these fluctuations are due to the government's temporary stock release, they are unlikely to generate long-term demand for feed rice.

Rice Trade

In accordance with WTO commitments, Korea imports 410,000 MT of rice annually at 5-percent duty under a TRQ regime implemented in 2015. At the end of 2019, Korea allocated 390,000 MT of rice imports to a country-specific quota (CSQ) within the TRQ for five trading partners (the United States, China, Vietnam, Thailand, and Australia) following negotiations to resolve a WTO dispute on rice tariffication. The remaining 20,000 MT are allocated on a most favored nation (MFN) basis, which is also available to the five countries with CSQs. Tariffs outside the quota remain prohibitively high at 513 percent.

Under this scheme, FAS/Seoul forecasts that MY 2024/25 rice imports will total 420,000 MT based on the schedule of deliveries planned under the WTO TRQ. The current year and out year projections show rice imports recovering significantly from MY 2022/23, when imports fell due to unfilled quantities of the 2022 TRQ volume. In CY 2022, the United States' allocation was not filled due to low production in California, and deliveries from China arrived later than expected. Korea allocated the full WTO TRQ amount in CY 2023 and is expected to do the same in CY 2024. According to Korea Agro-Fisheries and Food Trade Corporation (aT), which manages the TRQ allocation, it recently purchased about 70,000 MT of U.S. rice (milled basis) for arrival between August 2024 and March 2025.

Rice imported by aT is sold to wholesalers at a weekly auction. The sales pace at the weekly table rice auctions is not balanced across the five CSQ origins. Whereas Thai rice imported under the 2023 WTO TRQ is currently being sold at auction, aT is still selling U.S. table rice imported under the 2021 WTO TRQ. As the domestic rice price continues to fall, it is unlikely that the market will be able to deplete these older U.S. table rice stocks in a timely manner.

Table 16
2024 WTO Rice TRQ Contracts Status by Country

2024 WTO Rice TRQ Contracts Status by Country								
	(Metric Tons, Milled Basis, as of March 29, 2024)							
Country	Allocated TRQ Contracts Open Contractual Rate (%)							
USA	132,304	69,997	62,307	52.9				
China	157,195	0	157,195	0.0				
Vietnam	55,112	0	55,112	0.0				
Thailand	28,494	0	28,494	0.0				
Australia	15,595	0	15,595	0.0				
MFN	20,000	0	20,000	0.0				
Total	408,700	69,997	338,703	17.1				

Source: Korea Agro-Fisheries and Food Trade Corporation (aT)

Table 17
Status of aT selling Auctions for Table Rice under 2023 TRQ

Status of aT Selling Auctions for Table Rice under 2023 TRQ (Metric Tons, Milled Basis, as of March 29, 2024)								
Commodity (Period of Auctions)	USDA Grade	USDA Total Table Auctioned Ralance Auctioned Auctio						
U.S. Medium Grain	#1	0	0	0	0	N/A		
Thai Long Grain (Sep. 11, 2023, ~)	#1	3,100	2,358	742	76	2,111		
Vietnamese Long Grain	#1	0	0	0	0	N/A		
Total		3,100	2,358	742	76	N/A		

Source: Korea Agro-Fisheries and Food Trade Corporation (aT)

1/ Weighted average in Korean Won per Kg

Table 18
Status of aT selling Auctions for Table Rice under 2022 TRQ

St	Status of aT Selling Auctions for Table Rice under 2022 TRQ (Metric Tons, Milled Basis, as of January 16, 2024)								
Commodity (Period of Auctions)	USDA Grade	Total Table Rice TRQ	Auctioned Off (%)	Auctioned Price ^{1/}					
U.S. Medium Grain	#1	10,000	0	10,000	0	N/A			
Thai Long Grain (Jul. 4, 2022 ~ May 15, 2023)	#1	3,000	2,903	97	97	1,416			
Vietnamese Long Grain (Apr. 24, 2023, ~ Sep. 4, 2023)	#1	1,000	997	3	100	1,731			
Total		14,000	3,901	10,099	28	N/A			

Source: Korea Agro-Fisheries and Food Trade Corporation (aT)

1/ Weighted average in Korean Won per Kg

Table 19
Status of aT selling Auctions for Table Rice under 2021 TRQ

Status of aT Selling Auctions for Table Rice under 2021 TRQ (Metric Tons, Milled Basis, as of March 29, 2024)								
Commodity (Period of Auctions)	USDA Grade	Total Table Rice TRQ	Auctioned Off (%)	Auctioned Price ^{1/}				
U.S. Medium Grain (Jun. 19, 2023 ~)	#1	41,500	2,201	39,299	5.3	2,252		
Thai Long Grain	#1	1,400	1,400	0	100	1,248		
(Aug. 23, 2021 ~Jun. 27, 2022)	#1 ^{a/}	100	100	0	100	3,107		
Vietnamese Long Grain (Jan. 24, 2022 ~ Jul. 6, 2022)	#1	1,000	991	9	99	1,208		
Total		44,000	4,692	39,308	11			

Source: Korea Agro-Fisheries and Food Trade Corporation (aT)

Domestic Prices and Stocks

The Korean government aims to maintain a target rice price of 200,000 KRW per 80kg (milled basis). Despite maintaining this level during the 2023 harvest season, the price collapsed below the target in November 2023 and has been trending downward ever since.

Following the announcement in May 2023 to release a total of 140,000 MT of government reserves to the market (70,000 MT for feed and 70,000 MT for distilled liquor), MAFRA also announced it would double food aid donations from government rice reserves. Later, in December 2023, MAFRA announced that it would purchase an additional 100,000 MT of the new crop for overseas food aid donations, a break from past practice of using existing stockpiles. At the same time, MAFRA announced that 400,000 MT of rice would be sold in CY 2024 for feed to reduce nationwide rice stocks.

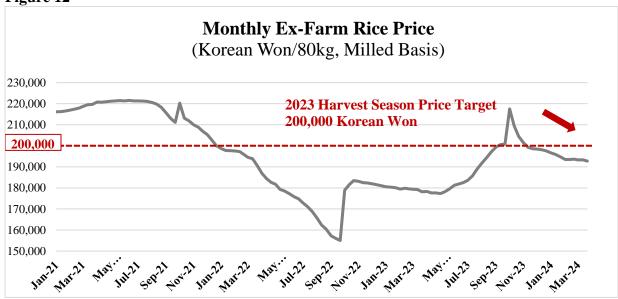
Exports

Korea has exported about 53,000 MT of rice annually in recent years, primarily for food aid donations under the Food Assistance Convention (FAC) that Korea joined in 2018. From 2024 onward, Korea will increase food aid donations through the United Nations World Food Programme (WFP) to about 100,000 MT of rice, and recipients will also be expanded to eleven countries from the current six. The details about the volume by country for 2024 have not yet been announced.

^{1/} Weighted average in Korean Won per Kg

a/ Hom Mali

Figure 12



Source: Korean Statistical Information Service (KOSIS)

Table 20 Production, Supply and Distribution

Rice, Milled	2022/	2023	2023/2024		2024/2025			
Market Year Begins	Nov	2022	Nov 2	Nov 2023		Nov 2024		
Korea, Republic of	USDA Official	New Post	USDA Official	New Post	USDA Official	New Post		
Area Harvested (1000 HA)	727	727	708	708	0	694		
Beginning Stocks (1000 MT)	1334	1334	1352	1427	0	1305		
Milled Production (1000 MT)	3764	3764	3702	3702	0	3595		
Rough Production (1000 MT)	4998	4998	4954	4898	0	4760		
Milling Rate (.9999) (1000 MT)	7531	7531	7473	7558	0	7553		
MY Imports (1000 MT)	262	268	460	470	0	420		
Total Supply (1000 MT)	5360	5366	5514	5599	0	5320		
MY Exports (1000 MT)	58	58	100	108	0	108		
Consumption and Residual (1000 MT)	3950	3881	3930	4186	0	3950		
Ending Stocks (1000 MT)	1352	1427	1484	1305	0	1262		
Total Distribution (1000 MT)	5360	5366	5514	5599	0	5320		
Yield (Rough) (MT/HA)	6.8748	6.8748	6.9972	6.9181	0	6.8588		
(1000 HA) ,(1000 MT) ,(MT/HA)								

Note: Official USDA data is based on the March 2024 WASDE data

MY = Marketing Year, begins with the month listed at the top of each column

Attachments:

No Attachments