

Voluntary Report – Voluntary - Public Distribution

Date: November 23, 2021

Report Number: KS2021-0031

Report Name: 2021 Rice Production Update

Country: Korea - Republic of

Post: Seoul

Report Category: Grain and Feed

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Report Highlights:

On November 15, 2021, Statistics Korea (KOSTAT) released a revised 2021 rice production estimate of 3.882 million metric tons (MMT), up an additional 1.6 percentage points from the initial rice production estimate in early September and up 10.7 percent from the previous year. The increase in production was driven by higher yield (up 9.8 percent) coupled with a slight increase in crop area (up 0.8 percent). The MY 2021/22 stocks-to-use ratio is expected to rise to 36.9 percent.

Rice Production:

On November 15, 2021, Statistics Korea (KOSTAT) released the revised 2021 rice production estimate of 3,881,601 metric tons (milled basis), representing an additional 1.6 percentage points increase from the most recent FAS Seoul update ([KS2021-0026](#)). The 2021 production estimate is now up 10.7 percent compared to the 2020 crop and is expected to be the largest since the 2018 crop.

Rice Yield:

Favorable weather developments during the heading, flowering, and harvest stages in 2021 (summarized below) resulted in an average rice yield of 5,299 kg per ha, which is up 9.8 percent from 2020 and 1.7 percent higher than the previous five-year average (5,210 kg/ha, 2016-2020). The 2021 yield is expected to be the highest level since 2016.

- 1) Higher temperatures in July through August: 26.4 degrees Celsius on average in 2021 compared to 23.4 degrees Celsius on average in 2020.
- 2) Lower precipitation in July through August: 297.7 mm in 2021, down 57.4 percent from 2020.
- 3) Longer sun light in July through August: 295.2 hours in 2021 compared to 134.5 hours in 2020.
- 4) Higher temperatures in September through October: 21.1 degrees Celsius on average in 2021 compared to 18.9 degrees Celsius on average in 2020.
- 5) Lower precipitation in September through October: 191.1 mm in 2021, down 10.4 percent from 2020.

Korea: Rice Area, Yield, and Production			
Crop Year	Area (1,000 ha)	Yield (KG/ha)	Production (Milled, 1,000 MT)
2011	854	4,946	4,224
2012	849	4,718	4,006
2013	833	5,081	4,230
2014	816	5,200	4,241
2015	799	5,416	4,327
2016	779	5,389	4,197
2017	755	5,264	3,972
2018	738	5,244	3,868
2019	730	5,131	3,744
2020	726	4,827	3,507
2021	732	5,299	3,882

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

Korea: 2021 Rice Area, Yield, and Production			
Type of Rice Land	Area	Yield (KG/ha)	Production (Milled, MT)
Paddy Rice	732,070	5,300	3,880,312
Upland Rice	407	3,167	1,289
Total	732,477	5,299	3,881,601

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

Korea: 2021 Rice Area and Production Estimate by Province (November 15 Crop Survey Basis)						
Crop Year	Area (Hectare)			Production (Metric ton)		
	2020	2021	Change	2020	2021	Change
National Total	726,432	732,477	0.8%	3,506,578	3,881,601	10.7%
Gyeonggi	75,128	74,717	-0.5%	348,221	382,680	9.9%
Gangwon	28,405	28,903	1.8%	127,387	155,501	22.1%
Chungbuk	32,745	33,403	2.0%	160,623	174,848	8.9%
Chungnam	131,284	135,399	3.1%	677,533	773,013	14.1%
Jeonbuk	110,880	114,509	3.3%	555,774	593,862	6.9%
Jeonnam	156,230	155,435	-0.5%	687,812	789,650	14.8%
Gyeongbuk	97,257	95,837	-1.5%	495,058	518,025	4.6%
Gyeongnam	65,028	64,079	-1.5%	314,333	338,698	7.8%
Jeju	43	65	51.2%	70	189	170.0%
Cities ^{1/}	29,432	30,130	2.4%	139,766	155,133	11.0%

Source: Statistics Korea (KOSTAT)

^{1/} paddy land located in eight big cities such as Seoul, Pusan, etc.

Rice Stocks:

The MY 2021/22 ending stocks forecast (as of the end of October 2021) is revised up 1.4 percentage points to 1.46 MMT (36.9 percent of total consumption) from the previous report's 1.40 MMT forecast.

Korea: Status of Rice Stocks (Milled rice, 1,000 MT, as of end October)						
Rice Year (Nov.-Oct.)	2016/17	2017/18	2018/19a/	2019/20b/	2020/21c/	2021/22c/
Total Stocks	2,000	1,560	1,015	1,172	1,169	1,458
Government Stocks	2,000	1,560	1,015	1,172	1,169	1,458
Total Domestic Consumption	4,435	4,746	4,650	4,076	3,958	3,948
Stocks to Use Ratio (%)	45.1	32.9	21.8	28.8	29.5	36.9

Source: FAS/Seoul Estimate based on MAFRA data

a/ MAFRA Revised

b/ MAFRA Preliminary

c/ FAS/Seoul forecast

Production, Supply, and Distribution Data Statistics:

Rice PS&D

Rice, Milled Market Year Begins Korea, Republic of	2019/2020		2020/2021		2021/2022	
	Nov 2019		Nov 2020		Nov 2021	
	USDA Official	New Post	USDA Official	New Post	USDA Official	New Post
Area Harvested (1000 HA)	730	730	726	726	732	732
Beginning Stocks (1000 MT)	1093	1093	1136	1172	1038	1169
Milled Production (1000 MT)	3744	3744	3507	3507	3816	3882
Rough Production (1000 MT)	5016	5016	4713	4713	5131	5211
Milling Rate (.9999) (1000 MT)	7464	7464	7441	7441	7437	7450
MY Imports (1000 MT)	454	466	450	500	410	410
TY Imports (1000 MT)	465	477	450	500	410	410
TY Imp. from U.S. (1000 MT)	150	153	0	160	0	132
Total Supply (1000 MT)	5291	5303	5093	5179	5264	5461
MY Exports (1000 MT)	55	55	55	52	55	55
TY Exports (1000 MT)	55	55	55	52	55	55
Consumption and Residual (1000 MT)	4100	4076	4000	3958	3950	3948
Ending Stocks (1000 MT)	1136	1172	1038	1169	1259	1458
Total Distribution (1000 MT)	5291	5303	5093	5179	5264	5461
Yield (Rough) (MT/HA)	6.8712	6.8712	6.4917	6.4917	7.0096	7.1188

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

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

TY = Trade Year, which for Rice, Milled begins in January for all countries. TY 2021/2022 = January 2022 - December 2022

Appendix:

Korean Rice Milling Rate Standards (Brown Rice to Milled Rice):

The current official milling rate applied in South Korea for processing brown rice from paddy rice to milled rice is 74 percent (9 degrees in the table below). However, the Korea Ministry of Agriculture, Food, and Rural Affairs (MAFRA) acknowledges changes to industry practices that polish rice to a greater degree in response to increased consumer demand for further-milled, higher-quality rice (10 to 12 degrees). As a result, MAFRA may revise its official milling rate to 72 percent (12 degrees) in the future.

The table below shows how milling rates change along the Degree of Milling (DOM) spectrum. The higher the milling degree is, the whiter and higher quality the rice becomes. The shelling rate from paddy to brown rice remains unchanged at 80 percent.

Korea: Milling Rate to Milled Rice from Paddy Rice (Percent)							
Degree(s)	1	2	5	7	9 ^{a/}	10	12 ^{b/}
% Shelling Rate (Paddy to Brown Rice)	80	80	80	80	80	80	80
% of Brown Rice Removed	0.8	1.6	4.0	5.6	7.2	8.0	9.6
% of Milled Rice Remaining	99.2	98.4	96.0	94.4	92.9	92.0	90.4
% Overall Milling Rate (Paddy to Milled Rice)	79.36	78.72	76.80	75.52	74.32	73.60	72.32

Source: Statistics Korea (KOSTAT)

a/ milling rate applicable for official statistics at present

b/ milling rate to be revised in the future

The Korean government releases rice production statistics that show a comparison of milled rice production based on nine-degree and twelve-degree milling rates (as shown in the table below). However, MAFRA continues to maintain its official production data series based on a nine-degree milling rate, so PSD figures align accordingly.

Korea: Rice Production Comparison per Milling Rate						
Crop Year	Area (1,000 HA)	Rough Rice (1,000 MT)	Based on 9 Degrees		Based on 12 Degrees	
			Milled Rice (1,000 MT)	Milling Rate (%)	Milled Rice (1,000 MT)	Milling Rate (%)
1995	1,056	6,389	4,694	73.47	4,568	71.50
1996	1,050	7,123	5,323	74.73	5,179	72.71
1997	1,052	7,315	5,449	74.49	5,302	72.48
1998	1,059	6,790	5,097	75.07	4,959	73.03
1999	1,066	7,066	5,263	74.48	5,121	72.47
2000	1,072	7,197	5,291	73.52	5,148	71.53
2001	1,083	7,407	5,515	74.46	5,366	72.44
2002	1,053	6,687	4,927	73.68	4,794	71.69
2003	1,016	6,151	4,451	72.36	4,331	70.41
2004	1,001	6,737	5,000	74.22	4,865	72.21
2005	980	6,435	4,768	74.09	4,640	72.11
2006	955	6,305	4,680	74.23	4,554	72.23
2007	950	5,962	4,408	73.93	4,289	71.94
2008	936	6,468	4,843	74.88	4,712	72.85
2009	924	6,502	4,916	75.61	4,787	73.62
2010	892	5,811	4,295	73.91	4,180	71.93
2011	854	5,616	4,224	75.21	4,110	73.18
2012	849	5,405	4,006	74.12	3,898	72.12
2013	833	5,632	4,230	75.11	4,116	73.08
2014	816	5,638	4,241	75.22	4,126	73.18
2015	799	5,771	4,327	74.98	4,210	72.95
2016	779	5,625	4,197	74.61	4,084	72.60
2017	755	5,286	3,972	75.14	3,866	73.14
2018	738	5,195	3,868	74.46	3,764	72.45
2019	730	5,016	3,744	74.64	3,644	72.65
2020	726	4,713	3,507	74.41	3,412	72.40
2021	732	5,211	3,882	74.50	3,777	72.48

Source: Statistics Korea (KOSTAT)

Attachments:

No Attachments.