

Voluntary Report – Voluntary - Public Distribution

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Report Highlights:

In calendar year (CY) 2020, Korea's potato production is expected to decrease by 17 percent (108,000 MT) from CY 2019 to 530,000 metric tons (MT). The projected production decrease is the result of reduced planted area and low spring and highland potato production due to unfavorable weather. Potatoes produced in the spring season or in highland areas accounted for about 95 percent of total production in 2019. As a result of the COVID-19 pandemic and the resulting drop in HRI demand, Korea's 2020 potato consumption is expected to decrease by about 12 percent. Korea's 2020 potato and potato products imports are expected to decrease by only three percent to 194,000 MT, as imports are focused on processed potato products which are less affected by COVID-19.

PRODUCTION

In 2020, Korea's fresh potato production is expected to decrease to 530,000 metric tons (MT), about 17 percent lower than previous year (637,896 MT). The production decrease will be driven mainly by reduced planted area caused by overproduction in the preceding year driving market prices lower and poor spring potato production this year due to unfavorable weather (cold and frost) during the potato growing season. In addition, the potato production in elevated areas (highland), which accounted for 22 percent of total production in 2019, is expected to decline by 14 percent (to 120,000 MT) due to reduced planted area and excessive rainfall during the growing season (June and July). However, the planted area for autumn potatoes, which accounted for only five percent of total production in 2019, is expected to increase by 16.5 percent to 2,785 hectares (ha) this year as market prices are expected to recover following poor spring potato production during the first six months of 2020.

Spring potatoes are planted from February through the middle of April and are harvested and marketed until the end of July. Spring potatoes are produced almost evenly across all regions in country, with the largest 2019 production areas in Gyeongsangbuk-do province (3,415 ha, 14%), Jeollanam-do province (3,010 ha, 12%), and Chungcheongnam-do province (2,684 ha, 11%).



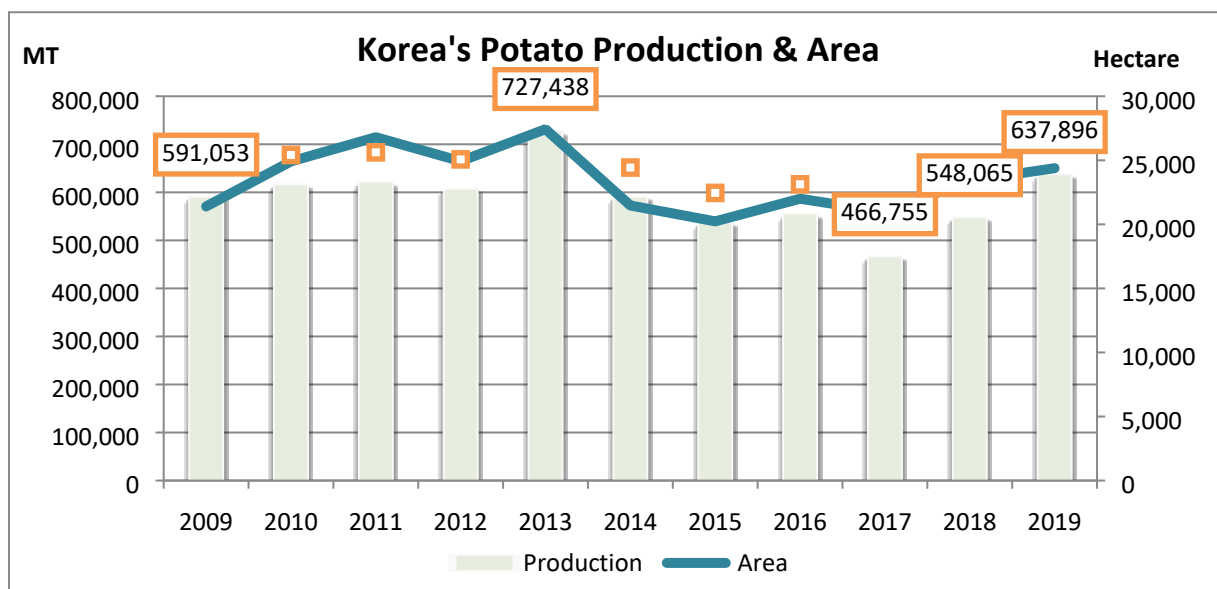
In 2020, Korea's total planted area for potatoes is expected to decrease by seven percent (about 1,722 hectares) to 22,662 ha from 24,384 ha in 2019 as many farmers shift to more profitable crops such as leafy vegetables (Korean cabbage or spring onions), radish, and carrots. Potato market prices (annual average retail and wholesale price) in 2019 fell sharply by 29 percent and 43 percent, respectively caused by an overproduction.

Korea's Potato Seasons By Cropping Pattern												
Cropping Pattern	MONTH											
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Spring		Seeding			Harvest & Shipment							
Highland				Seeding			Harvest & Shipment					
Autumn							Seeding					
	Harvest & Shipment											

Source: Rural Development Administration (RDA), Korea Rural Economic Research Institute (KREI)

2019 Potato Production

In 2019, Korea's potato production increased by 16.4 percent to 637,896 MT due to favorable weather during the main spring growing season and increased planted area driven by strong market prices in 2018. In the five years prior to 2019 potato production fluctuated between 590,000 MT and 470,000 MT. Potato production in highland (elevated) areas in 2019 also increased sharply by 52 percent due to increased planted area to 3,844 ha from 3,462 ha in the previous year.



Source: Statistics Korea & Korea Rural Economic Institute (KREI)

As a result of the significant increase (14.7 percent) in potato planted area to 18,150 hectares in 2019, spring potato production jumped to 466,000 MT, up about 21 percent from the previous year. This was the highest level of production in six years (since 571,024 MT in 2013) due to increased yields driven by favorable climate during the growing season. In 2019, highland potato production also recorded its highest level in 14 years at 139,000 MT, about 52 percent higher than the previous year (92,000 MT) due primarily to an 11 percent increase in planted area and favorable weather during the summer growing season.

Processing Potatoes

The Korean potato chip processing industry uses 30,000 to 35,000 MT of domestically grown fresh potatoes every year, accounting for about 6.3 percent of average domestic annual production (549,000 MT) between 2015 and 2019. Korean chip processors also use about the same amount, 30,000 – 35,000 MT, of imported chipping potatoes every year (mainly from Australia and the United States) during the December to April off season of domestic potato production.

Potato Prices

Domestic market prices fluctuate continuously depending on the level of domestic production and demand. In 2018, the annual average retail price for spring potatoes increased by 18.8 percent (KRW 726/kg) from the previous year due to reduced potato supply. However, the average annual retail price plunged nearly 30 percent (KRW 1,357/kg) in 2019 due primarily to increased production from the previous year.

Korea's Retail Price for Fresh Potatoes by Month (Unit: Korean Won/Kg)

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Average
2017	5,140	5,260	4,900	4,130	3,960	3,320	2,650	2,960	3,300	3,340	3,500	4,040	3,870
2018	4,840	5,390	5,660	7,650	6,770	3,930	2,830	3,000	3,440	3,540	3,810	4,290	4,596
2019	4,560	4,490	4,230	4,920	4,210	3,050	2,240	2,150	2,160	2,160	2,230	2,470	3,239
2020	2,890	3,390	4,500	4,630	3,840	2,900	-	-	-	-	-	-	

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

CONSUMPTION

In 2020, Korea's potato consumption is expected to decrease to 14.1 kilograms from the previous year's 16.1 kilograms due to the COVID-19 pandemic, which reduced demand in both the school catering and HRI sectors. On the other hand, the demand at home for fresh potatoes and various high-quality Home Replacement Meal (HMR) products through online shopping is expected to partially offset reduced demand in group catering and HRI sectors. Most fresh potatoes (about 94 percent: 514,000 MT) are used for direct consumption at restaurants and at home in various side dishes.

As a result of the Covid-19 pandemic, the Korean food industry was hit hard by a sharp drop in demand in the group catering sector as school meal programs were suspended because schools remained closed during March and April. Covid-19 also negatively affected the entire food service sector as many consumers refrained from dining out since the advent of the virus. Unlike many other major economies however, Korea never completely closed all restaurants and the already widely used food delivery services have further increased in popularity.

Consumer demand for processed potato products (mainly frozen French fries) steadily increased in spite of the pandemic due to: 1) an increasingly westernized diet pattern among the younger generation, 2) increased demand for convenience foods like ready to eat (RTE) or ready to cook (RTC) products including high quality HMR products resulting from an increased number of single and two member households, and 3) the fast introduction of air fryers for cooking at home that can cook frozen processed foods using hot air, while using less cooking oil.

In recent years, Korean consumers have gladly paid higher prices for convenience, which has influenced the entire food industry. Many high-quality HMR products have been introduced to the market, particularly targeting consumers who want to enjoy the quality of famous restaurant menus at home. According to aT

(Korea Agro-Fisheries Trading Corporation), the HMR market in Korea increased 41 percent in value to 3.2 trillion Korean won (USD 2.6 billion) in 2018 from 2.3 trillion Korean won (USD 1.9 billion) in 2016. The HMR market was valued at KRW 4 trillion last year and aT forecasts a further increase to KRW 5 trillion for this year due to Covid-19.

The air fryer cooker introduction at home is also one key driver for rapid development of the HMR market in recent years. Many small-sized families (single and two member households) purchased air fryers because they use less cooking oil compared to a conventional frying pan. According to a recent survey by CJ, the leading food company in Korea, 61 percent of Korean households owned home air fryers last year (2019), up from 38 percent in 2018.

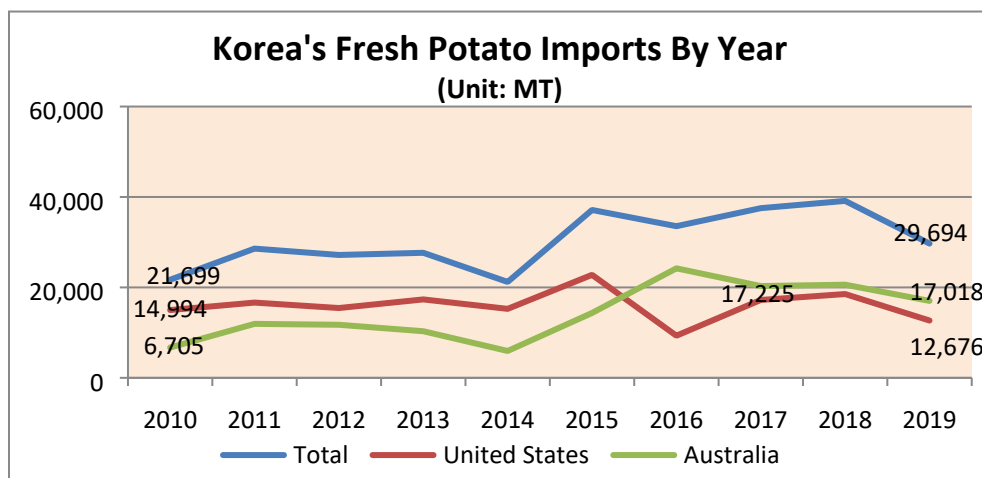
Korea: Per Capita Potato Consumption (2014-2019)

	2014	2015	2016	2017	2018	2019
Per Capita Consumption (kg)	14.7	14.3	14.3	12.7	14.3	16.1

Source: Korea Rural Economic Institute (KREI)

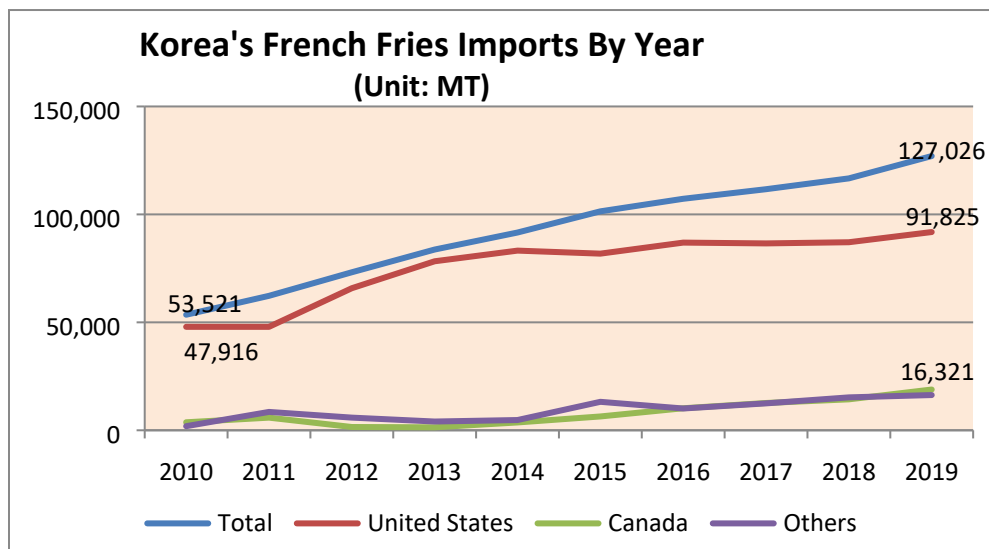
TRADE

In 2020, Korea's potato and potato product imports are expected to decrease by three percent to 194,000 MT from the previous year's 199,940 MT. The main causes of the expected decline are: 1) abundant supply of stored domestic potatoes caused by increased production in 2019, and 2) reduced demand from the group catering sector (including HRI and school meal programs) caused by the COVID-19 outbreak. However, the import of processed potatoes (mainly frozen French fries) is expected to grow slightly due to increased home demand driven by the rapid introduction of air fryers and continued development of the HMR market.



Korea's total potato and potato product imports decreased by three percent to 85,723 MT during the first six months (January – June 2020) from the previous year (88,347 MT). As a result of increased domestic production

in 2019, fresh potato imports for chip processing declined by 15.3 percent to 20,232 MT from the previous year (23,236 MT), while the import of processed potatoes (frozen French fries, frozen potatoes and potato flour) was basically unchanged from the previous year's level of 65,490 MT.



Over the past ten years, 2010-19, Korea's potato and potato product imports increased by 120 percent to 199,940 MT from 91,054 MT in 2010. As a result of changing dietary patterns among the younger generation and a rapid increase in the number of single and two-member households, Koreans are consuming more convenient and high quality HMR products. Processed potato imports account for about 80 percent of total imports, and the steady increase in demand for prepared frozen French fries accounts for the bulk of total potato imports.

Inspection & Quarantine for U.S. Potatoes:

Due to quarantine regulations, 28 U.S. states (Maryland, Pennsylvania, West Virginia, New York, Utah, Nebraska, California, Montana, Arizona, Colorado, New Mexico, North Dakota, Kansas, Wyoming, Delaware, Oklahoma, South Dakota, Nevada, Maine, Michigan, Minnesota, Mississippi, New Hampshire, Ohio, Wisconsin, Texas, Illinois and North Carolina) are not allowed to export fresh potatoes to Korea.

The main quarantine pests of concern to Korea are Potato spindle tuber viroid, *Synchytrium endobioticum* (potato wart), *Globodera rostochiensis* (golden nematode), *Globodera pallida*, and zebra chip. Accordingly, all potato shipments imported into Korea are subject to quarantine inspection for the related pest/fungus of concern. Imported fresh potatoes must be washed and be reasonably free of soil and foreign materials.

Table 1. Korea: Area planted (Ha), Production (TMT) from 2014-2019

	2016		2017		2018		2019	
Cropping Pattern	Ha	TMT	Ha	TMT	Ha	TMT	Ha	TMT
Spring	15,259	394	14,943	322	15,819	385	18,150	466
Highland	3,579	122	3,244	99	3,462	92	3,844	140
Autumn	3,162	40	2,787	46	4,121	71	2,390	32
Total	22,000	556	20,974	467	23,402	548	24,384	638

Source: Korea Rural Economic Institute (KREI)

Table 2. Korea: Production, Supply, & Demand (MT) from 2016-2019

PSD	2016	2017	2018	2019
Total Supply	735,000	652,682	739,565	836,296
Domestic Production	555,670	466,755	548,065	637,896
Imports 1/	180,486	189,294	193,700	199,900
Exports	1,156	1,384	2,200	1,500
Self-Sufficiency Rate (%)	75.6	71.2	74.1	76.3

Note: Imports (dehydrated, prepared, and frozen potatoes) are converted into fresh potatoes based on yield

Source: Korea Rural Economic Institute (KREI)

Table 3. Korea: Per Capita Potato Consumption (2016-2020)

	2016	2017	2018	2019	2020
Per Capita Consumption (kg)	14.3	12.7	14.3	16.1	14.1

Source: Korea Rural Economic Institute (KREI) & FAS Seoul Forecast for 2020

Table 4. Annual Retail & Wholesale Price for No.1 Grade Potatoes

Year	Average Annual Retail Price (₩/kg)	Average Annual Wholesale Price (₩/kg)	Annual Average Exchange Rate (₩/\$)	U.S. Import Price (₩/kg) ¹
2015	2,780	1,520	1,131	625
2016	2,960	1,402	1,161	660
2017	3,430	1,920	1,131	623
2018	4,410	2,609	1,100	720
2019	3,150	1,485	1,165	727
2020 1/	3,910	1,553	1,207	N/A

Note 1/: 2020 data for Retail & Wholesale Price is average from 01/01/2020 – 07/17/2020

Source: Korea Agro-Fisheries & Food Trade Corporation (aT) (Retail & Wholesale Price); Bank of Korea (Annual Average Exchange Rate); Korea International Trade Association (U.S. Import Value and Import Quantity)

Table 5. Korea: Fresh Potato Import USD & MT from 2016-2019

	2016		2017		2018		2019	
Country	\$(1,000)	MT	\$(1,000)	MT	\$(1,000)	MT	\$(1,000)	MT
Australia	12,981	24,219	10,817	20,300	11,793	20,602	9,247	17,018
U.S.	5,165	9,320	9,691	17,225	11,949	18,530	8,020	12,676
Other	0	0	0	0	0	0	0	0
Total	18,146	33,539	20,508	37,525	23,742	39,132	17,267	29,694

Source: Korea International Trade Association (KITA)

Table 6. Korea: Prepared Potato Import Dollars & Metric Tons from 2016-2019

	2016		2017		2018		2019	
Country	\$(1,000)	MT	\$(1,000)	MT	\$(1,000)	MT	\$(1,000)	MT
U.S.	107,588	86,932	107,518	86,559	109,635	87,103	117,258	91,825
Canada	17,136	10,204	20,416	12,645	22,736	14,333	29,635	18,880
China	1,875	1,065	2,037	1,178	2,215	1,244	2,542	1,435
Belgium	6,797	5,567	9,717	8,021	11,823	9,710	14,048	11,041
Netherlands	3,090	3,144	3,144	2,934	4,049	3,786	3,857	3,520
Other	588	317	625	333	864	507	470	325
Total	137,074	107,229	143,457	111,670	151,322	116,683	167,810	127,026

Source: Korea International Trade Association (KITA)

Table 7. Korea: Table Stock Potato (0701900000 a) TRQ under KORUS FTA

	2019	2020	2021	2022	2023
In-quota rate (%)	0	0	0	0	0
Out-of-quota rate (%)	304	304	304	304	304
TRQ (MT)	3,690	3,801	3,915	4,032	4,153

Table 8. Korea: Chipping Potatoes (0701900000 b & 0701900000 c) Tariffs under KORUS FTA

	2019	2020	2021	2022	2023
b: May 1 st – Nov.30 th rate (%)	266	228	190	152	114
c: Dec. 1 st – April 30 th rate (%)	0	0	0	0	0

Table 9. Effective FTAs & Competitive Category

Country	FTA Effective	Competitive Category
Canada	2014	Prepared Potatoes
Australia	2014	Fresh Potatoes
China	2015	Frozen Potatoes

Table 10. Korea's Potatoes Imports By Year

Korea's Potatoes Imports By Year (Unit: MT)										
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
French Fries	53,521	62,277	73,195	83,723	91,602	101,411	107,229	111,670	116,683	127,026
Fresh Potatoes	21,699	28,581	27,176	27,654	21,212	37,125	33,539	37,525	39,132	29,694
Fr. Potatoes	1,431	1,808	3,293	3,577	3,742	4,484	4,139	4,554	5,242	5,333
Potato Flour	22	96	1,655	2,871	2,321	2,318	1,716	1,622	682	1,195
Total	76,673	92,762	105,319	117,825	118,877	145,338	146,623	155,371	161,739	163,248

Source: Korea Customs Service (KCS)

Attachments:

No Attachments.