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Korea - Republic of

Losing Juice: This year's expected pear production increase is an exception to longer term trend

2017 Pear Annual

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Report Highlights:

Although planted area for pears continues to decline in a trend that has continued since the year 2000, expected increased yields will result in an increase in pear production of about four percent to 247,300 metric tons (MT) in marketing year (MY) 2017/18. Pear consumption is projected to increase 4.6 percent to 214,300 MT from 204,847 MT the previous marketing year. Increased exports to the United States and Vietnam will contribute to an overall increase in exports to 27,000 MT, about 900 MT higher than the previous marketing year.

Commodities:

Pears, Fresh

Planted area

In marketing year (MY) 2017/18 (July – June), Korea’s pear planted area is forecast to decrease 2.7 percent to 10,860 hectare (HA) from the previous marketing year. After peaking at 26,000 hectares in the year 2000, pear planted area in Korea has steadily decreased to around 11,000 HA in MY 2017/18 due mainly to the following factors: 1) rapid urbanization of rural population centers, which has included the construction of industrial complexes in pear farming areas surrounding cities, 2) rapid aging of the farming population and 3) a lower net profit rate (net profit / gross income) compared to other fruits in rural communities (see the table 2). Table 1 presents data from production regions showing the decline in pear planted area over the past three years.

As a result of decreased planted area, fresh pear production is also expected to decrease gradually in coming years. In MY 2016/17, most Korean pears (about 73 percent) were produced on 8,150 HA from four main provinces (Jeollanam-do, Gyeonggi-do, Chungcheongnam-do and Gyeongsangbuk-do) out of total 11,164 HA. However, total pear planted area is forecast to decrease to below 11,000 HA in MY 2017/18.

<u>Table 1. Korea’s Pear Area by Province (Unit: Hectare)</u>			
Province	MY 2014/15	MY 2015/16	MY 2016/17
	Cultivated Area (Ha)	Cultivated Area (Ha)	Cultivated Area (Ha)
Jeollanam-do	3,457	3,499	2,499
Gyeonggi-do	2,577	2,426	2,248
Chungcheongnam-do	2,389	2,334	2,094
Gyeongsangbuk-do	1,536	1,422	1,309
Other Provinces-do	3,168	2,983	3,014
Total	13,127	12,664	11,164

Source: Korea Statistical Information Service (KOSIS)

In particular, many Korean pear farms switched over to more profitable fruits such as peach and other various tropical or subtropical fruits due to the extra labor and management cost of growing and packing pears. Table 2 also shows that during the past seven years in Korea, farming pears has led to the lowest net profit rate among fruits.

As a result of a lower net profit rate (Net profit / Gross income) for pear farming compared to other domestically produced fruits, pear planted area has decreased rapidly for the past seven years. The additional requirement of more labor and packing costs during the fruit growing and the production stages for pears has made it more difficult for pears to compete with other domestic fruits and various

imported fruits in the market. In calendar year 2016, the net profit rate for pears was 54.1 percent, 64.7 percent for peaches, and 56.6 percent for apples.

Calendar Year	2010	2011	2012	2013	2014	2015	2016
Pear	59.1	58.2	59.4	59.3	54.4	54.5	54.1
Apple	61.9	60.1	67.7	62.3	61.4	62.4	56.6
Peach	67.8	62.5	67.5	68.3	64.7	66.9	64.7
Grape	68	68.3	70.7	69.4	66.6	65	61.5
Tangerine	70.7	72.6	67.6	66.7	59.7	60.8	72.8

Source: Rural Development Administration (RDA)

The aging rural community is another serious factor that has caused the continuous decline in Korean pear farm area in recent years. In calendar year 2016, the aging population (over 65-years-old) in rural community reached 40.3 percent of the population, the highest level ever, and the first time this percentage has ever reached 40 percent. Elderly pear farmers are closing their farms; some are switching to more easily handled fruits because extra labor is required for individually paper-packing each fruit during the growing season. Additionally, the continual decline in demand for fresh pears has dis-incentivized farmers from planting pears, adding to the speed of decline in farming area. Furthermore, as more Korean consumers enjoy various imported fruits throughout the year, the demand for pears will continue to decline since it is increasingly recognized by many young Korean consumers as only for traditional Korean holidays or as a fruit for ancestral rites.

	2008	2009	2010	2011	2012	2013	2014	2015	2016
Farm Population (1,000 Person)	3,187	3,117	3,063	2,962	2,912	2,847	2,752	2,569	2,496
Ratio of over 65-year-old (%)	33.3	34.2	31.8	33.7	35.6	37.3	39.1	38.4	40.3

Source: Korea Statistical Information Service (KOSIS)

Production

In MY 2017/18, Korea's pear production is forecast to increase about four percent to 247,300 MT from the previous marketing year, due to an increased yield rate (6.8 percent per 0.1 HA) and an increased number of large pears per tree, which was caused by favorable weather conditions during the fruit growing period during May and early September this marketing year. Despite decreased pear planted area of about 2.7 percent (304 hectares) from the previous marketing year, the increased yield rate (6.8 percent) is expected to cause total production to increase 3.9 percent to 247,300 MT. In

particular, lower outbreak of pests during the fruit growing period, no cold damage during flowering season, and an increased number of large pears per tree, are expected to increase total production of fresh pears.

Korean pear farmers mainly produce one single cultivar known as Singo. Korean farmers prefer the Singo cultivar because the fruits are larger and can be stored longer than other cultivars. Moreover, large pears are in high demand during Korean holidays. However, outside the holiday gift-giving season, consumer preference for large pears falls off. Also, demand for pears in general has declined as an increasing number of alternative fruits have become available to consumers.

Table 4. Korea's Pear Planted Area By Cultivars (Unit: Hectare)

	Singo	Wonhwang	Other	Total
Calendar Year				
2012	11,866	855	1,632	14,353
2013	11,396	819	1,525	13,740
2014	10,891	776	1,460	13,127
2015	10,544	732	1,388	12,664
2016	9,249	646	1,269	11,164

Source: Korea Statistical Information Service (KOSIS)

Consumption:

In MY 2017/18, Korea's fresh pear consumption is expected to increase 4.6 percent to 214,300 MT from 204,847 MT the previous marketing year; mainly due to about four percent expected increased production. However, pear consumption is forecast to continue declining in coming years since: 1) pears are relatively unpopular with the younger generation; 2) the implementation of a new anti-bribery act from September 2016 led to reduced sales of fruit gift sets in general; and 3) pears have faced hard competition with other various and high quality fruits including imported fruits.

Per capita consumption of fresh pears reached 9.2 kilograms in calendar year 2008. This number has gradually decreased by four percent to an annual average to 4.1 kilograms in calendar year 2016, due to reduced domestic production, decreased demand, and increased imports of alternative imported fruits.

Table 5. Korea: Per Capita Fruit Consumption (Unit: Kg)

Year	Total Fruits	Pear	Apple	Grape	Citrus 1/	Persimmon	Peach	Other
2012	61.8	3.1	7.9	6.6	13.8	3.3	4	23.1
2013	63.2	5.2	9.8	6.3	13.5	3	3.8	21.4
2014	66.5	5.5	9.4	6.5	14.3	3.7	4.2	22.9
2015	66.7	4.7	11.4	6.4	13.2	3.3	4.7	23

2016	63.6	4.1	11.2	5.4	13	2.3	5.1	22.5
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1/Including imported oranges

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

More than 50 percent of fresh pears are distributed and consumed during two traditional Korean holidays (“Seol Nal”: Lunar New Year’s Day in late January or early February, and “Chuseok”, the Korean Harvest Thanksgiving Day in late September or early October). In particular, the majority of fresh pears are consumed for fruit gift sets during these two traditional Korean holidays or they are used as fruits for ancestral rites. Other than during the peak holiday seasons, pears are in less demand than other fruits.

Year	2011	2012	2013	2014	2015	2016
Fruits						
Oranges	141,961	173,943	152,714	98,371	111,743	154,944
Grape	45,189	54,192	58,743	59,260	66,193	49,025
Banana	352,671	367,673	313,604	359,124	363,466	364,550
Pineapple	73,009	73,131	75,917	75,419	68,373	77,375
Mangoes	1,892	2,839	6,154	10,599	13,469	11,346
Kiwi	29,757	28,945	20,065	19,590	23,822	30,735
Cherries	4,982	9,454	9,088	13,359	12,583	13,820
Pomegranate	6,739	8,823	13,596	10,761	8,810	4,950
Grapefruit	9,337	10,452	11,580	19,491	25,010	23,169
Lemon	7,371	10,630	13,907	13,539	17,274	15,247
Total	672,908	740,082	675,368	679,513	710,743	745,161

Source: Korea Rural Economic Institute (KREI)

Fresh pear quantities used for processing vary each year depending on the size of production, outbreak of pests, and weather conditions during the fruit growing period. Every year, about 5,000 MT to 7,000 MT of off-grade fruits or non-marketable fruits are used for processing. As a result of increased pear exports and increased domestic demand during the longer “Chuseok” holidays (about ten days) in MY 2017/18, the quantity of fresh pears used for processing (i.e., juice production) is expected to show a decrease to 6,000 MT, about 1,000 MT less than the previous marketing year.

In MY 2016/17, about 7,000 MT of fresh pears are expected to be used for processing. This number is about 3,055 MT lower than a year ago due to two reasons: 1) a lower pest outbreak than a year ago, and 2) an 8.8 percent reduced production from the previous marketing year 2015/16.

Trade:

Exports

In MY 2017/18, Korean fresh pear exports are projected to increase to 27,000 MT, about 900 MT higher than the previous marketing year, mainly due to increased demand in the Vietnamese and U.S. markets. The United States and Taiwan are still the two main export markets for Korean fresh pears with 78 percent share. Recently, Korea's fresh pear exports to Vietnam have increased significantly as the demand for high quality imported fruits from Thailand, Japan and Korea has increased. In recent years, high quality imported fruits have become very popular in gift sets in Vietnam.

In MY 2016/17, Korea exported 26,167 MT of fresh pears, about 13 percent higher from MY 2015/16 mainly due to the extra demand in Vietnam and the United States. Korea exported 3,432 MT of fresh pears to Vietnam, which is 161 percent higher than the previous marketing year. Exports to the United States also increased about 15 percent to 10,686 MT during the 2016/17 year. As a result of increased awareness for Korean fresh pears among Asian- American consumers in the western United States, exports into the region are expected to increase gradually in the coming years.

Imports

No fresh pear imports are allowed under Korea's phytosanitary regulations.

Production, Supply and Demand Data Statistics:

Pears, Fresh Market Begin Year	2015/2016		2016/2017		2017/2018	
	Jul 2015		Jul 2016		Jul 2017	
Korea, Republic of	USDA Official	New Post	USDA Official	New Post	USDA Official	New Post
Area Planted	12664	12664	10883	11164	0	10860
Area Harvested	0	0	0	0	0	0
Bearing Trees	0	0	0	0	0	0
Non-Bearing Trees	0	0	0	0	0	0
Total Trees	0	0	0	0	0	0
Commercial Production	260975	260975	250000	238014	0	247300
Non-Comm. Production	0	0	0	0	0	0
Production	260975	260975	250000	238014	0	247300
Imports	0	0	0	0	0	0
Total Supply	260975	260975	250000	238014	0	247300
Fresh Dom. Consumption	226475	227793	217000	204847	0	214300
Exports	23000	23127	26000	26167	0	27000
For Processing	11500	10055	7000	7000	0	6000
Withdrawal From Market	0	0	0	0	0	0
Total Distribution	260975	260975	250000	238014	0	247300

(HA) ,(1000 TREES) ,(MT)

Korea: Pears Production Situation 1/

Year	Area (HA)	Production (MT)	Yield (Kg/0.1 Hectare)
2010	16,239	307,320	1,896
2011	15,081	290,494	1,926
2012	14,353	172,599	1,203
2013	13,740	282,212	2,054
2014	13,127	302,731	2,306
2015	12,664	260,975	2,061
2016	11,164	238,014	2,132
2017 2/	10,860	247,300	2,278

1/ Calendar year basis

2/ Preliminary forecast by Korea Rural Economic Institute (KREI)

Source: Korea Statistical Information Service (KOSIS)

Korea: Pear Utilization (Unit: MT) 1/

Year	Total	Fresh	Export	Processing
2012	172,599	142,695	15,677	14,227
2013	282,212	254,443	20,210	7,559
2014	302,731	273,609	23,096	6,026
2015	260,975	228,427	22,493	10,055
2016 2/	238,014	228,408	25,606	7,000
2017 2/	247,300	214,300	27,000	6,000

1/ Calendar year basis

2/ Preliminary forecast by KREI & FAS Seoul

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

Korea: Pear Production as Ratio to Total Fruit Production (Unit: 1,000 MT, Ratio: Percent)

Year	Total Fruits (1,000 MT)	Pear (1,000 MT)	Ratio (%)
2005	2,593	443	17.1
2011	2,458	290	11.8
2012	2,374	173	7.3
2013	2,523	282	11.2
2014	2,697	303	11.2
2015	2,697	261	9.7
2016	2,652	238	8.9

Source: Korea Statistical Information Service (KOSIS)

Korea: Per Capita Fruits Consumption (Unit: Kg)

Year	Total Fruits	Pears	Apple	Grape	Citrus 1/	Persimmon	Peach	Other
2011	62.4	5.5	7.6	6.3	13.6	3.3	3.7	22.4
2012	61.8	3.1	7.9	6.6	13.8	3.3	4	23.1
2013	63.2	5.2	9.8	6.3	13.5	3	3.8	21.4
2014	66.5	5.5	9.4	6.5	14.3	3.7	4.2	22.9
2015	66.7	4.7	11.4	6.4	13.2	3.3	4.7	23
2016	63.6	4.1	11.2	5.4	13	2.3	5.1	22.5

1/Including imported oranges

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

Korea: Monthly Korean Pears Exports (Unit: MT)

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
'17	2,980	1,964	1,450	537	317	13	0	3,117	-	-	-	-
'16	3,167	1,180	1,225	378	493	257	1	3,847	2,866	4,584	3,708	3,900
'15	3,219	686	1,627	322	148	64	68	1,977	2,379	4,707	3,562	3,748
'14	2,693	1,322	1,333	371	87	20	2	3,359	1,719	4,608	3,514	4,068
'13	525	209	615	68	19	30	0	1,619	2,645	5,057	4,073	5,260
'12	1,125	672	1,226	359	41	25	0	1,647	1,792	3,240	3,343	2,208

Source: Korea Customs Service & Korea International Trade Association

Korea: Monthly Average Foreign Exchange Rate
(Unit: Korean Won / 1U\$)

Month	2015	2016	2017
Jan.	1088.86	1201.67	1134.40
Feb.	1098.40	1217.35	1144.92
Mar.	1112.57	1188.21	1134.77
Apr.	1088.66	1147.51	1132.73
May	1091.27	1171.51	1125.28
Jun.	1112.20	1170.50	1130.04
Jul.	1143.22	1144.09	1134.40
Aug.	1179.10	1111.68	1130.79
Sep.	1184.76	1107.49	1131.59
Oct.	1148.18	1125.28	-
Nov.	1151.97	1161.64	-
Dec.	1172.24	1182.28	-

Source: Industrial Bank of Korea

Trade Matrix

Export Matrix for Korean Pears (Sand Pears)

Export Trade Matrix						
Country: Korea						
Commodity: Commodity: Fresh Pears (HS 0808.30)				Unit: MT & US\$1,000		
Exports to	MY 2014/15 (July 14 – June 15)		MY 2015/16 (July 15 – June 16)		MY 2016/17 (July 16 – June 17)	
Country	Volume	Value	Volume	Value	Volume	Value
U.S.	9,725	29,325	9,265	25,323	10,686	30,528
Taiwan	10,367	25,431	9,986	24,635	9,742	22,095
Hong Kong	610	1,231	465	959	588	1,165
Vietnam	927	1,752	1,313	2,712	3,432	6,989
All Others	1,707	4,498	2,098	5,586	1,719	4,421
Grand Total	23,336	62,236	23,127	59,215	26,167	65,198

Source: Korea Customs Service & Korea International Trade Association

Price

Korea: Average Retail Prices for Korean “Singo” Pear (Sand pear), Nationwide
(Unit: Korean Won per 10 Fruits)

Month	High Quality		Medium Quality	
	CY 2016	CY 2017	CY 2016	CY 2017
Jan.	30,095	30,457	18,976	19,157
Feb.	30,644	30,095	20,934	19,645
Mar.	31,269	31,707	19,797	18,756
Apr.	30,588	32,082	19,770	19,211
May	31,797	32,862	20,113	19,401
Jun.	32,598	36,960	20,548	25,120
Jul.	33,170	38,743	21,656	29,691
Aug.	31,443	37,497	22,563	29,012
Sep.	30,828	30,752	20,961	21,513
Oct.	30,250	-	18,877	-
Nov.	30,207	-	19,562	-

Dec.	30,369	-	18,315	-
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Source: Korea Agro-Fisheries & Food Trade Corporation (aT)

Korea: Average Wholesale Prices for Korean “Singo” Pear (Sand pear), Nationwide
(Unit: Korean Won per Kilogram)

Month	High Quality		Medium Quality	
	CY 2016	CY 2017	CY 2016	CY 2017
Jan.	2,945	2,653	2,391	2,258
Feb.	3,053	2,639	2,512	2,228
Mar.	2,964	2,731	2,470	2,331
Apr.	2,933	2,791	2,440	2,391
May	2,952	2,960	2,459	2,547
Jun.	3,017	3,291	2,549	2,858
Jul.	3,356	3,848	2,914	3,363
Aug.	3,678	3,736	3,264	3,230
Sep.	3,082	3,046	2,690	2,672
Oct.	2,404	-	2,063	-
Nov.	2,383	-	2,045	-
Dec.	2,531	-	2,198	-

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