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Korea - Republic of

Citrus Annual

Smaller Harvests: Korea's citrus industry continues to decrease in size

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Report Highlights:

Citrus production in Marketing Year (MY) 2017/2018 is projected to continue a multi-year decrease to 560,000 MT, the lowest production level for the past two decades. Although open field tangerines still make up 75% of the crop, the quantity grown in open fields is expected to decrease, while the number of late-grown and greenhouse grown varieties are anticipated to increase. Due to lower production numbers and increased competition from imported fruit, consumption of the domestic crop is also expected to decrease to 508,000 MT. Imports of oranges are also forecast to fall by 13,000 MT, to 130,000 MT due to lower production numbers in the United States.

Production

In Marketing Year (MY) 2017/18 (October – September), Korea's total citrus production is forecast at 560,000 tons, about 6.7 percent lower than the 600,000 tons produced in MY 2016/17. The reduction is mainly due to 1) lower estimated number of fruits per tree by a cyclical "high-low" production pattern of fresh tangerine in open field area, which covers almost 75 percent of total citrus production in Korea and 2) the increase of damaged fruit and fallen fruit caused by unfavorable weather during the fruit growing period. Unfavorable weather that can affect production includes long hot days during the summer (with heat waves and tropical nights) and heavy rainfall during the early fruit ripening period.

Open Field Tangerine

The Korean citrus industry forecasts the lowest production ever at 420,000 metric tons (MT) of open field tangerines (also known as "Unshu" oranges) for MY 2017/18, which is about ten percent lower than the 466,817 MT in MY 2016/17. This decrease is projected based on findings of about a 20 percent reduction in the number of fruits per tree during the final survey done by the Jeju citrus industry in the middle of November, right before the main harvest season. The Jeju citrus industry accounts for more than 99 percent of fresh citrus production in Korea, and thus, their findings are indicative of the entire industry. In addition, as a result of extremely hot summer weather (with heat waves and tropical nights) during the tangerine growing season in July and August and strong rainfall after the hot weather, many tangerine farms suffered from a high ratio of heat damaged fruits and a high percentage of fallen fruit. However, the Jeju tangerine industry forecasts the quality of 2017/18 fruits will be better and will have a higher Brix level (sugar content) than the previous marketing year because of ample sunshine during the main fruit ripening period through the harvest season into late November.

In general, Korea's open field tangerines are harvested from early October through December and marketed by the end of February. Meanwhile, the remainder of citrus products, including winter "Unshu" oranges, late varieties and heated greenhouse tangerines are produced in quantities of about between 120,000 MT - 130,000 MT each year.

Late Varieties, winter "Unshu" and Greenhouse tangerine

In MY 2017/18, the remainder of citrus production (citrus that is not open field tangerine production) including late variety citrus, heated greenhouse tangerines and winter "Unshu" oranges are forecast at 140,000 MT, about 5.4 percent higher from the previous marketing year mainly due to the increasing planted area for late varieties, including winter "Unshu" oranges, which have had strong consumer demand in recent years. Late varieties are marketed mainly during the January – March period and generally compete with U.S. navel oranges and domestic fresh strawberries, since the marketing seasons overlap. In addition, more open field tangerine farms switched their citrus production to protected facility farming, which is essential for late varieties and winter "Unshu" orange production. Production of late varieties and winter "Unshu" oranges, which are recognized as

high value added fruits by Korean consumers, increased by 138 percent to 111,165 MT over the past decade, while production of open field tangerines decreased by 31 percent to 466,817 MT.

To ensure some supply of Jeju tangerines year round, about 21,000 tons of fresh tangerines are produced in heated greenhouses and are marketed mainly between May and early October, until the kick-off of the open field tangerine season. In MY 2017/18, heated greenhouse tangerine production is forecast at 22,000 MT with a slightly increased planted area.

Revision of Marketable Tangerine Category

As a result of increased tangerine quality in recent years (with a higher Brix (sugar) level than several years ago), the Jeju citrus industry strongly pursued a revision to the marketable tangerine category, which had been classified only by the size of fruits since 1997. The old provincial ordinance specified that if the size of a tangerine was too small (less than 49 mm in diameter) or too big (bigger than 70 mm in diameter), they were classified as non-marketable fruit and were prohibited for sale outside of Jeju island to maintain the proper quality of Jeju tangerines. However, the Jeju provincial government revised its provincial ordinance in June 2017 to allow any tangerines to be sold if they reach a level of 10 or higher on the Brix (sugar) scale, regardless of size.

Planted Area

In MY 2017/18, Korea's total planted area for citrus is forecast at 20,333 hectares (ha), about 0.8 percent lower from the previous marketing year, attributable to alternative land use, especially commercial and residential development, as well as an aging farmer population. Meanwhile, the planted area for winter "Unshu" oranges and other late varieties is forecast to increase consistently under a provincial FTA facility support program. The FTA facility support program was introduced in 2004 to support citrus growers by reducing production costs and increasing productivity. The Jeju citrus industry also determined that in order to meet the increased consumer demand for high quality citrus, more open field farm should switch to more value-added citrus production by using protected facility farming to grow late varieties and winter "Unshu" oranges.

Total tangerine planted area continues to decline since it peaked at 26,500 ha in MY 1999/2000. Planted area has declined in response to a decrease in demand following increased competition from other fruits as a result of many FTAs. Consumer demand has also shifted toward imported tropical and subtropical fruits after consumers have been able to sample and taste new types of fruit during overseas travel. In MY 2016/17, about 31,000 Jeju farms were involved in tangerine farming on 20,491 ha and of that total area, about 82 percent (16,784 ha) is open field tangerine area.

In MY 2016/17, planted area for open field tangerines decreased 1.4 percent to 16,376 ha due to a shift to protected facility farming of winter "Unshu" or later varieties for better agricultural income. Furthermore, the reduced yield rate in MY 2017/18 due to unfavorable weather conditions such as a longer hot weather in summer season and above average rainfall during the ripening period caused a high ratio of fruit drop and heat damaged fruits.

Consumption

In MY 2017/18, citrus consumption (excluding imported citrus) is forecast at 508,000 MT, about 6.3 percent lower than the previous marketing year mainly due to the low anticipated production of open field tangerines. Furthermore, citrus faces strong competition from other domestic fruits such as fresh strawberries during the same season. As a result of reduced production of open field tangerines, market prices (wholesale and retail prices) were up about 10 percent during the first two months (October and November) of this marketing year compared to the same period of 2016.

| Average Prices for First Two Months (October and November) of Season (Unit: Korean Won) | | | |
|---|--------------------|--------------------|------------|
| Open Field Tangerine | Calendar Year 2016 | Calendar Year 2017 | Change (%) |
| Average Wholesale Price (KRW / 10 Kg) | 20,722 | 22,668 | + 9.4 |
| Average Retail Price (KRW / 10 Fruits) | 3,210 | 3,534 | + 10.1 |

Source: Agricultural & Fishery Marketing Corporation

Jeju Citrus Checkoff Fund Program

On September 29, 2017, the Jeju citrus industry announced it would introduce a checkoff program beginning January 1, 2018 to increase the market competitiveness of Jeju tangerines. The Jeju citrus industry set the checkoff fund at 0.25 percent of the shipment price for a citrus farm regardless of its cropping patterns, and 0.05 percent of total sales for previous year for distribution organizations including farmers' cooperatives, farming corporations and merchants' groups. Checkoff funds raised will be used for marketing and business diversification, in order to deal with the changed market situation caused by an increase in imported fresh fruits and changed consumer demand for domestic fruits.

Fresh tangerines for processing

In MY 2017/18, the quantity of fresh tangerines used for processing is forecast at 50,000 MT, about 10.7 percent lower than the previous marketing year due to the following reasons: 1) anticipated reduced production of open field tangerines to 420,000 MT from 466,817 MT in MY 2016/17, and 2) reduced quantity of non-marketable tangerines due to the revised category of marketable fruit size that now allows the sale of tangerines meeting the Brix (sugar) level 10, regardless of the size.

The Jeju tangerine concentrate industry is composed of one provincial corporation (Jeju Development Corporation) and two private companies (Ilhae and Lotte). It used to purchase about 80,000 to 100,000 MT of fresh tangerines annually for juice concentrate processing, and it has played an important role of maintaining the optimal level of fresh tangerine supply in the market. Until last year, the purchasing price of tangerines for processing was set by the citrus operation committee of the Jeju Development Corporation under the Jeju Provincial Government, but the price decision authority was recently transferred to the Citrus Marketing and Shipping Association under the revised Jeju Provincial Ordinance. In MY 2017/18, the association increased its

purchasing price to 180 Korean won per kilogram, which consists of 120 Korean won from processors and 60 Korean won from a subsidy from the Jeju provincial government. The purchasing price has been 160 Korean won for the past five years, since MY 2012/13.

Trade

Orange

In Marketing Year (MY) 2017/18, Korea's orange imports are forecast to be 130,000 MT, which amounts to an approximately 13,000 MT decrease from the previous marketing year. An anticipated reduction of orange production in California will be the main cause for the decline. In MY 2016/17, U.S. oranges, which have a favorable FTA duty rate and a consistent quality, dominated the Korean orange market with 93.4 percent share, followed by South African (2.5 percent) and Spanish (1.8 percent) fruits. Korean orange importers estimate more than 60 percent of imported oranges (navels) have a high sugar content that appealed strongly to Korean consumers to be eaten as dessert fruits. High sugar content is one of the main factors used by Korean consumers in recent years in choosing fruit.

In general, Korea imports the majority of fresh oranges (about 88 percent) during the February to May period, mainly due to the FTA seasonal duty rate (five percent in 2017 and zero percent in 2018) for California navel oranges under the KOREA-US FTA, which applies during the March 1 – August 31 period. A 50 percent duty rate is applied for the rest of the year (September 1 – February 28). The Korean fruit industry asserts that U.S. navel oranges compete with various domestically produced fruits, such as strawberries, winter "Unshu" oranges, late variety tangerines, and imported table grapes from Chile during this period.

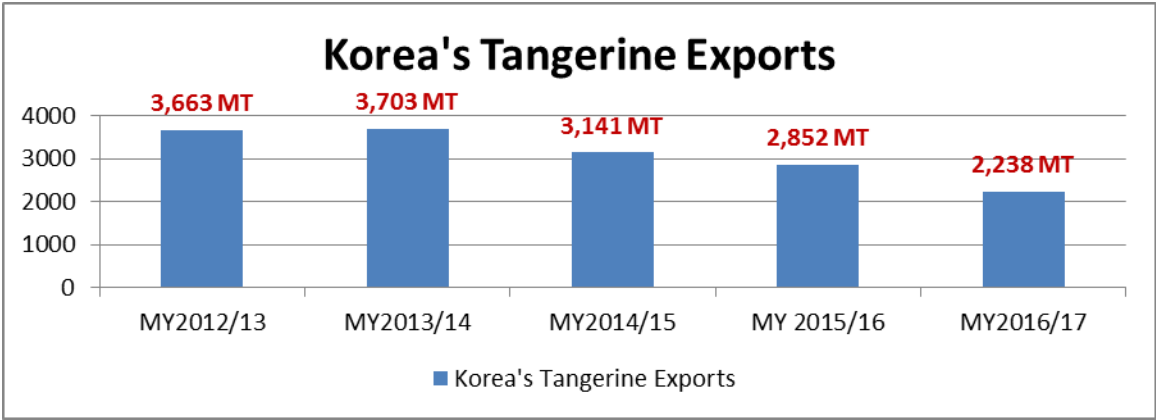
Lemon & Grapefruit

As a result of the increasing size of the squeezed juice market for the past several years in Korea due to the concern of many Korean consumers about their health, U.S. fresh lemons also gained ground in the Korean market with 78.2 percent share in MY 2016/17, followed by Chile with 21 percent. However, U.S. grapefruit imports declined 20 percent to 10,597 MT in MY 2016/17 from MY 2015/16 at 13,224 MT due to reduced production in Florida caused by citrus greening and the damage by hurricane "Irma" in September 2017. Damage from "Irma" is expected to continue to influence Florida grapefruit production in coming years.

Exports

In MY 2017/18, Korea's fresh tangerine exports are forecast at 2,000 MT, which is slightly lower than the quantity exported during the previous marketing year, mainly due to higher domestic market prices caused by an anticipated production decrease of open field tangerines. Korea exported about 3,200 tons annually for the

past three years, but exports in the current marketing year are expected to decline to around 2,000 tons as a result of reduced production and higher domestic market prices than export prices.



Every year, 99.5 percent of Korea’s fresh tangerines are consumed through the markets (island and mainland), direct sales, and through supplies for the military service. The remaining 0.5 percent is exported. However, not many tangerine farms are interested in the export market for a couple of reasons, including: 1) lower export price than domestic price, and 2) the difficulty of exporting product with skins that are perishable during a long shipment period and because the product requires extra care to meet import requirements of importing countries.

| Unit Price Comparison Between Domestic Wholesale Price and Export Price (Unit: US Dollar) | | | |
|---|---------|---------|---------|
| Open Field Tangerine | CY 2014 | CY 2015 | CY 2016 |
| Domestic Wholesale Price (USD) per 1 Kilogram | 1.94 | 1.66 | 1.83 |
| Export Price (USD) per 1 Kilogram (FOB Price) | 1.34 | 1.20 | 1.16 |

Source: Agricultural & Fishery Marketing Corporation

Revised Tangerine Export Protocol for European Union

On August 15, 2017, the Korean Animal and Plant Quarantine Agency (APQA) announced guideline export requirements for Korean citrus sent to the European Union. The guideline will enable Korean citrus to be exported to European Union member countries with a unified export requirement that specifies the management of export fruit packing centers, citrus farm quarantine for exports, disinfection of fruit after the harvest, and export quarantine inspection by Korean government quarantine officers.

Frozen Concentrated Orange Juice (FCOJ)

As a result of increased consumer demand for health-oriented foods for the past several years, the processed fruit juice market has declined gradually. The market popularity of orange juice, which is recognized as a representative fruit juice drink, demonstrates an overall downward trend over the past five to six years. However, squeezed fruit juices, including fresh lemons and grapefruits are increasingly in demand. Korea’s fruit

juice drink market has been struggling in recent years mainly due to increased coffee specialty shops and fresh fruit juice shops. Meanwhile, various functional drinks including ginseng, sports drinks and vitamin drinks showed sales increases in MY 2016/17. Diversified consumer demand for fruit juice other than conventional fruit juice (orange, grape and apple) led to increased imports of grapefruit and lemons in recent years.

Production, Supply and Demand Data Statistics:

| Tangerines/Mandarins, Fresh Market Begin Year Korea, Republic of | 2015/2016 | | 2016/2017 | | 2017/2018 | |
|--|---------------|----------|---------------|----------|---------------|----------|
| | Oct 2015 | | Oct 2016 | | Oct 2017 | |
| | USDA Official | New Post | USDA Official | New Post | USDA Official | New Post |
| Area Planted | 20523 | 20523 | 20450 | 20491 | 0 | 20333 |
| Area Harvested | 19292 | 19292 | 19223 | 19262 | 0 | 19113 |
| Bearing Trees | 24115 | 24115 | 24029 | 24077 | 0 | 23891 |
| Non-Bearing Trees | 6670 | 6670 | 6646 | 6660 | 0 | 6609 |
| Total No. Of Trees | 30785 | 30785 | 30675 | 30737 | 0 | 30500 |
| Production | 635 | 635 | 615 | 600 | 0 | 560 |
| Imports | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Supply | 635 | 635 | 615 | 600 | 0 | 560 |
| Exports | 3 | 3 | 2 | 2 | 0 | 2 |
| Fresh Dom. Consumption | 547 | 547 | 543 | 542 | 0 | 508 |
| For Processing | 85 | 85 | 70 | 56 | 0 | 50 |
| Total Distribution | 635 | 635 | 615 | 600 | 0 | 560 |
| | | | | | | |

(HECTARES) ,(1000 TREES) ,(1000 MT)

| Oranges, Fresh Market Begin Year Korea, Republic of | 2015/2016 | | 2016/2017 | | 2017/2018 | |
|---|---------------|----------|---------------|----------|---------------|----------|
| | Oct 2015 | | Oct 2016 | | Oct 2017 | |
| | USDA Official | New Post | USDA Official | New Post | USDA Official | New Post |
| Area Planted | 0 | 0 | 0 | 0 | 0 | 0 |
| 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 No. Of Trees | 0 | 0 | 0 | 0 | 0 | 0 |
| Production | 0 | 0 | 0 | 0 | 0 | 0 |
| Imports | 154 | 154 | 145 | 143 | 0 | 130 |
| Total Supply | 154 | 154 | 145 | 143 | 0 | 130 |
| Exports | 0 | 0 | 0 | 0 | 0 | 0 |
| Fresh Dom. Consumption | 154 | 154 | 145 | 143 | 0 | 130 |
| For Processing | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Distribution | 154 | 154 | 145 | 143 | 0 | 130 |
| | | | | | | |

(HECTARES) ,(1000 TREES) ,(1000 MT)

| Orange Juice Market Begin Year Korea, Republic of | 2015/2016 | | 2016/2017 | | 2017/2018 | |
|---|---------------|----------|---------------|----------|---------------|----------|
| | Oct 2015 | | Oct 2016 | | Oct 2017 | |
| | USDA Official | New Post | USDA Official | New Post | USDA Official | New Post |
| Deliv. To Processors | 84477 | 84676 | 70000 | 56372 | 0 | 50000 |
| Beginning Stocks | 3000 | 3000 | 4500 | 4500 | 0 | 5500 |
| Production | 6758 | 6758 | 5600 | 4510 | 0 | 4000 |
| Imports | 15511 | 14854 | 14854 | 15509 | 0 | 14500 |
| Total Supply | 25269 | 24612 | 24954 | 24519 | 0 | 24000 |
| Exports | 11 | 13 | 50 | 150 | 0 | 100 |
| Domestic Consumption | 20758 | 20099 | 20304 | 18869 | 0 | 17900 |
| Ending Stocks | 4500 | 4500 | 4600 | 5500 | 0 | 6000 |
| Total Distribution | 25269 | 24612 | 24954 | 24519 | 0 | 24000 |
| | | | | | | |

(MT)

Production

Korea: Citrus Production Situation 1/

| Year | Area (HA) | Production (MT) | Farm Household | Gross Income (Mil.won) |
|---------|-----------|-----------------|----------------|------------------------|
| 2008 | 20,937 | 592,160 | 31,027 | 631,325 |
| 2009 | 20,898 | 741,014 | 31,200 | 601,113 |
| 2010 | 20,747 | 568,478 | 30,905 | 668,484 |
| 2011 | 20,608 | 588,054 | 30,797 | 764,158 |
| 2012 | 20,595 | 668,610 | 31,070 | 801,175 |
| 2013 | 20,577 | 672,267 | 31,041 | 901,421 |
| 2014 | 20,555 | 696,763 | 31,404 | 670,739 |
| 2015 | 20,523 | 635,032 | 31,458 | 602,196 |
| 2016 | 20,491 | 599,642 | 31,525 | 911,392 |
| 2017 2/ | 20,333 | 560,000 | N/A | N/A |

1/ Calendar year basis including greenhouse

2/ Preliminary forecast by FAS Seoul

Source: Jeju Provincial Government

Korea: Citrus Utilization (Unit: MT)

| Year | Total | Fresh | Processing | Other 1/ |
|------|---------|---------|------------|----------|
| 2008 | 592,160 | 427,669 | 88,664 | 75,827 |
| 2009 | 741,014 | 519,423 | 123,551 | 98,040 |
| 2010 | 568,478 | 385,456 | 81,117 | 101,905 |
| 2011 | 588,054 | 371,944 | 102,933 | 113,177 |
| 2012 | 668,610 | 432,058 | 55,814 | 180,738 |
| 2013 | 672,267 | 433,650 | 92,834 | 145,783 |
| 2014 | 696,763 | 400,712 | 158,371 | 137,680 |
| 2015 | 635,032 | 340,353 | 84,679 | 210,000 |
| 2016 | 599,642 | 351,826 | 56,372 | 191,444 |

1/ Other – including exports, military consumption and consumption within Jeju island

Source: Jeju Provincial Government

Korea: Citrus Summer Greenhouse Production Situation

| Year | Area (HA) | Production (MT) | Gross Income (Mil. Won) | Household | Price (Won/Kg) |
|------|-----------|-----------------|-------------------------|-----------|----------------|
| 2008 | 313 | 22,356 | 71,941 | 954 | 3,218 |
| 2009 | 304 | 22,636 | 72,445 | 912 | 3,200 |
| 2010 | 312 | 21,602 | 74,507 | 929 | 3,449 |
| 2011 | 295 | 21,807 | 70,818 | 867 | 3,247 |

| | | | | | |
|---------|-----|--------|--------|-----|-------|
| 2012 | 285 | 19,963 | 65,719 | 843 | 3,292 |
| 2013 | 262 | 19,555 | 77,859 | 732 | 3,982 |
| 2014 | 255 | 21,571 | 60,695 | 713 | 2,814 |
| 2015 | 250 | 20,401 | 63,021 | 659 | 3,089 |
| 2016 | 284 | 21,660 | 76,087 | 697 | 3,513 |
| 2017 1/ | 287 | 21,378 | N/A | N/A | N/A |

1/ Preliminary forecast by FAS Seoul

Source: Jeju Provincial Government & Korea Rural Economic Institute

Korea: Purchasing Price of Processing Tangerine Oranges (Korean Won/kg)

| Year | Price |
|------|-------|
| 2009 | 80 |
| 2010 | 120 |
| 2011 | 140 |
| 2012 | 160 |
| 2013 | 160 |
| 2014 | 160 |
| 2015 | 160 |
| 2016 | 160 |
| 2017 | 180 |

Source: Jeju Citrus Growers' Cooperative

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

| Year | Total Fruits | Citrus | Ratio |
|------|--------------|--------|-------|
| 2007 | 2,750 | 777 | 28.0 |
| 2008 | 2,698 | 636 | 23.6 |
| 2009 | 2,881 | 753 | 26.1 |
| 2010 | 2,489 | 615 | 24.7 |
| 2011 | 2,458 | 681 | 27.7 |
| 2012 | 2,374 | 692 | 29.1 |
| 2013 | 2,523 | 683 | 27 |
| 2014 | 2,697 | 722 | 26.7 |
| 2015 | 2,697 | 672 | 24.9 |
| 2016 | 2,652 | 640 | 24.1 |

Source: Korea Statistical Information Service (KOSIS)

Korea: Total Fruits and Citrus Per Capita Consumption

| Year | Total Fruits | Total Tangerine 1/ |
|------|--------------|--------------------|
|------|--------------|--------------------|

| | | |
|------|---------|---------|
| 2008 | 65.5 Kg | 13.0 Kg |
| 2009 | 67.7 Kg | 15.4 Kg |
| 2010 | 62.4 Kg | 12.6 Kg |
| 2011 | 62.4 Kg | 13.6 kg |
| 2012 | 61.8 Kg | 13.8 Kg |
| 2013 | 63.2 Kg | 13.5 Kg |
| 2014 | 66.5 Kg | 14.3 Kg |
| 2015 | 66.7 Kg | 13.2 Kg |
| 2016 | 63.6 Kg | 13 Kg |

1/Including imported oranges

Source: Ministry for Food, Agriculture, Forestry, and Fisheries

Tariff

Korea: Import Quota and Tariff for Fresh Orange (Unit: MT, %)

| Year | Quota | In-quota Tariff | Out-quota Tariff |
|------|--------|-----------------|------------------|
| 2004 | 57,017 | 50 | 50 |
| 2015 | 57,017 | 50 | 50 |
| 2016 | 57,017 | 50 | 50 |
| 2017 | 57,017 | 50 | 50 |
| 2018 | 57,017 | 50 | 50 |

Korea: Import Quota and Tariff for Other Citrus (Unit: MT, %)

| Year | Quota | In-quota Tariff | Out-quota Tariff |
|------|-------|-----------------|------------------|
| 2004 | 2,097 | 50 | 144 |
| 2015 | 2,097 | 50 | 144 |
| 2016 | 2,097 | 50 | 144 |
| 2017 | 2,097 | 50 | 144 |
| 2018 | 2,097 | 50 | 144 |

1/ HS 0805.20.1000, HS 0805.20.9000, HS0805.50.2020, HS 0805.90.0000

Import Quota under the KORUS FTA (Unit: MT, %)

| HSK 10 | Description | Base Rate | 2016 | 2017 | 2018 |
|------------------|-------------|-----------|-------|-------|-------|
| 0805100000 | Oranges | | | | |
| March1 – end Aug | | 50 | 10 | 5 | Zero |
| Sept 1 – end Feb | | | | | |
| TRQ (MT) | | | 2,814 | 2,898 | 2,985 |
| In-quota Rate | | | 0 | 0 | 0 |

| | | | | | |
|-------------------|--|----|----|----|----|
| Out of Quota Rate | | 50 | 50 | 50 | 50 |
|-------------------|--|----|----|----|----|

Note: After year 5, the in-quota quantity increases by 3% per year, compounded annually.

Korea: Monthly Orange Imports
(Unit: MT)

| Year | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|------|-------|--------|--------|--------|--------|-------|-------|-------|-------|-------|-------|-------|
| '17 | 5,918 | 11,421 | 60,543 | 40,549 | 8,925 | 3,471 | 1,946 | 2,067 | 2,669 | 1,357 | - | - |
| '16 | 5,210 | 10,830 | 68,324 | 46,908 | 9,719 | 1,780 | 2,340 | 2,275 | 2,166 | 1,473 | 838 | 3079 |
| '15 | 2,926 | 5,759 | 40,090 | 38,067 | 13,132 | 1,815 | 1,346 | 1,500 | 2,608 | 2,207 | 590 | 1,704 |
| '14 | 4,124 | 12,289 | 36,914 | 29,366 | 3,584 | 2,857 | 1,554 | 1,461 | 2,408 | 1,796 | 362 | 1,656 |
| '13 | 8,205 | 13,059 | 53,124 | 51,630 | 13,265 | 1,680 | 1,450 | 1,589 | 2,816 | 2,627 | 643 | 2,628 |
| '12 | 6,876 | 27,475 | 55,741 | 50,731 | 16,350 | 3,582 | 2,801 | 2,613 | 2,175 | 1,515 | 952 | 3,131 |
| '11 | 7,005 | 17,580 | 45,113 | 43,219 | 14,679 | 2,622 | 2,467 | 2,007 | 2,158 | 1,928 | 1,136 | 2,047 |

Source: Korea Customs Service & Korea International Trade Association

Trade Matrix

Import Matrix for Oranges

| Import Trade Matrix | | | | |
|--------------------------------|-----------------------------------|---------|-----------------------------------|---------|
| Country: Korea | | | | |
| Commodity: Orange (HS 0805.10) | | | Unit: MT & US\$1,000 | |
| Imports from | MY 2015/16 (Oct. 15 – Sep. 16) | | MY 2016/17 (Oct. 16 – Sep. 17) | |
| Country | Volume | Value | Volume | Value |
| U.S. | 144,448 | 206,954 | 133,490 | 211,511 |
| Others | | | | |
| South Africa | 4,339 | 4,548 | 3,577 | 4,061 |
| Australia | 1,290 | 2,265 | 1,743 | 2,974 |
| Spain | 2,297 | 2,549 | 2,530 | 2,867 |
| Chile | 1,679 | 2,275 | 1,252 | 1,697 |

| | | | | |
|------------------|---------|---------|---------|---------|
| Other | | | 308 | 309 |
| | | | | |
| Total for Others | 9,605 | 11,637 | 9,410 | 11,908 |
| Grand Total | 154,043 | 218,591 | 142,900 | 223,419 |

Source: Korea International Trade Association

Import Matrix for Lemon

| Import Trade Matrix | | | | |
|-------------------------------|-----------------------------------|--------|-----------------------------------|--------|
| Country: Korea | | | | |
| Commodity: Lemon (0805.50.10) | | | Unit: MT & US\$1,000 | |
| Imports from | MY 2015/16 (Oct. 15 – Sep. 16) | | MY 2016/17 (Oct. 16 – Sep. 17) | |
| Country | Volume | Value | Volume | Value |
| U.S. | 12,006 | 28,134 | 12,427 | 31,064 |
| Others | | | | |
| Chile | 1,994 | 4,246 | 3,452 | 7,857 |
| Other | 3 | 30 | 11 | 23 |
| | | | | |
| Total for Others | 1,997 | 4,277 | 3,463 | 7,880 |
| Grand Total | 14,003 | 32,410 | 15,890 | 38,944 |

Source: Korea International Trade Association

Import Matrix for Grapefruit

| Import Trade Matrix | | | | |
|---------------------------------|-----------------------------------|--------|-----------------------------------|--------|
| Country: Korea | | | | |
| Commodity: Grapefruit (0805.40) | | | Unit: MT & US\$1,000 | |
| Imports from | MY 2015/16 (Oct. 15 – Sep. 16) | | MY 2016/17 (Oct. 16 – Sep. 17) | |
| Country | Volume | Value | Volume | Value |
| U.S. | 13,224 | 18,369 | 10,597 | 15,630 |
| Others | | | | |
| Israel | 3,223 | 3,595 | 2,573 | 3,019 |
| S. Africa | 8,662 | 10,583 | 9,428 | 11,255 |
| Mexico | 11 | 15 | 0 | 0 |
| | | | | |
| Total for Others | 11,896 | 14,193 | 12,001 | 14,274 |

| | | | | |
|-------------|--------|--------|--------|--------|
| Grand Total | 25,119 | 32,562 | 22,598 | 29,904 |
|-------------|--------|--------|--------|--------|

Source: Korea International Trade Association

Export Matrix for Korean Tangerines

| Export Trade Matrix | | | | |
|---|-----------------------------------|-------|-----------------------------------|-------|
| Country: Korea | | | | |
| Commodity: Tangerine (HS 0805.20.10/20/90) Unit: MT & US\$1,000 | | | | |
| Exports to | MY 2015/16 (Oct. 15 – Sep. 16) | | MY 2016/17 (Oct. 16 – Sep. 17) | |
| Country | Volume | Value | Volume | Value |
| U.S. | 491 | 685 | 412 | 582 |
| Others | | | | |
| Russia | 412 | 339 | 481 | 333 |
| Canada | 953 | 815 | 740 | 645 |
| Japan | 0 | 0 | 0 | 0 |
| Hong Kong | 149 | 270 | 149 | 228 |
| Guam | 90 | 181 | 62 | 96 |
| Indonesia | 12 | 27 | 0 | 2 |
| Malaysia | 3 | 16 | 60 | 61 |
| United Kingdom | 342 | 545 | 0 | 0 |
| Mongolia | 157 | 179 | 71 | 78 |
| Singapore | 185 | 277 | 186 | 259 |
| Others | 58 | 135 | 77 | 85 |
| | | | | |
| Total for Others | 2,361 | 2,784 | 1,826 | 1,787 |
| Grand Total | 2,852 | 3,469 | 2,238 | 2,369 |

Source: Korea International Trade Association

Import Matrix for FOJC

| Import Trade Matrix | | | | |
|--|-----------------------------------|--------|-----------------------------------|--------|
| Country: Korea | | | | |
| Commodity: FOJC (2009.11/12/19) Unit: MT & US\$1,000 | | | | |
| Imports from | MY 2015/16 (Oct. 15 – Sep. 16) | | MY 2016/17 (Oct. 17 – Sep. 17) | |
| Country | Volume | Value | Volume | Value |
| U.S. | 6,561 | 16,475 | 8,099 | 26,592 |
| Others | | | | |

| | | | | |
|------------------|--------|--------|--------|--------|
| Spain | 1,826 | 2,724 | 4,103 | 9,180 |
| Turkey | 160 | 555 | 155 | 498 |
| Brazil | 4,333 | 8,042 | 1,021 | 2,041 |
| Australia | 812 | 1,199 | 642 | 1,080 |
| Israel | 69 | 133 | 99 | 220 |
| Greece | 230 | 290 | 350 | 422 |
| Canada | 18 | 74 | 0 | 0 |
| U.K. | 8 | 18 | 0 | 0 |
| Taiwan | 45 | 145 | 170 | 449 |
| Italy | 84 | 200 | 54 | 167 |
| Other | 708 | 1,144 | 816 | 1,430 |
| | | | | |
| Total for Others | 8,293 | 14,524 | 7,410 | 15,487 |
| Grand Total | 14,854 | 30,999 | 15,509 | 42,079 |

Source: Korea International Trade Association

Export Matrix for FOJC

| Export Trade Matrix | | | | |
|---------------------------------|-----------------------------------|-------|-----------------------------------|-------|
| Country: Korea | | | | |
| Commodity: FOJC (2009.11/12/19) | | | Unit: MT & US\$1,000 | |
| Exports to | MY 2015/16 (Oct. 15 – Sep. 16) | | MY 2016/17 (Oct. 16 – Sep. 17) | |
| Country | Volume | Value | Volume | Value |
| U.S. | 2 | 2 | 19 | 19 |
| Others | | | | |
| Japan | 0 | 0 | 0 | 0 |
| Netherland | 0 | 0 | 0 | 0 |
| Israel | 0 | 0 | 0 | 0 |
| PRC | 1 | 3 | 54 | 58 |
| Denmark | 0 | 0 | 0 | 0 |
| Singapore | 0 | 0 | 0 | 0 |
| Hong Kong | 4 | 6 | 12 | 12 |
| Canada | 0 | 0 | 0 | 0 |
| Philippines | 0 | 0 | 0 | 0 |
| Mongolia | 2 | 6 | 45 | 98 |
| Greece | 0 | 0 | 0 | 0 |
| Other | 4 | 5 | 1 | 40 |
| | | | | |
| Total for Others | 11 | 20 | 131 | 226 |
| Grand Total | 13 | 22 | 150 | 245 |

Source: 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 | 1131.57 |
| Nov. | 1151.97 | 1161.64 | - |
| Dec. | 1172.24 | 1182.28 | - |

Source: Industrial Bank of Korea

Price Table

Price

Korea: Average Wholesale Prices for Regular Unshu (tangerines) (Unit: Korean Won per 10 Kilogram)

| Month | High Quality | | Medium Quality | |
|------------------------|--------------|--------|----------------|--------|
| | 2016 | 2017 | 2016 | 2017 |
| Jan. | 16,020 | 20,880 | 12,970 | 17,560 |
| Feb. | 25,767 | 39,510 | 22,022 | 34,860 |
| Mar. | 31,154 | 51,400 | 26,246 | 46,000 |
| April - September: N/A | | | | |
| Oct. | 22,307 | 24,200 | 17,707 | 19,633 |
| Nov. | 19,136 | 21,136 | 14,936 | 16,600 |
| Dec. | 17,467 | - | 14,124 | - |

Source: Agricultural & Fishery Marketing Corporation Korea: Average Wholesale

Wholesale Prices for Greenhouse Tangerine, Nationwide (Unit: Korean Won per 3 Kilogram)

| Month | 2016 | 2017 |
|-------|--------|--------|
| May | 23,328 | 25,080 |
| Jun. | 19,071 | 18,824 |
| Jul. | 15,313 | 13,086 |
| Aug. | 16,382 | 16,451 |
| Sep. | 13,429 | 14,589 |
| Oct. | 8,224 | 8,404 |
| Nov. | 6,073 | - |

Source: Jeju Special Self-Governing Province Citrus Marketing & Shipping Association

Korea: Average Retail Prices for Regular Unshu (tangerines), Nationwide
(Unit: Korean Won per 10 Fruits)

| Year Month | 2015 | 2016 | 2017 | % Change from the previous year |
|---------------|-------|-------|-------|---------------------------------|
| Jan | 2,422 | 2,212 | 3,043 | 38 |
| Feb | 2,410 | 2,913 | 4,357 | 50 |
| Mar | 3,062 | 3,256 | 6,108 | 88 |
| Oct | 3,376 | 3,668 | 4,015 | 9 |
| Nov | 2,313 | 2,751 | 3,053 | 11 |
| Dec | 2,145 | 2,689 | - | - |

Prices for high quality

Source: Agricultural & Fishery Marketing Corporation

Korea: Average Retail Prices for Imported Oranges (Navel), Nationwide
(Unit: Korean Won per 10 Fruits)

| Year Month | 2015 | 2016 | 2017 | % Change from the previous year |
|---------------|--------|--------|--------|---------------------------------|
| Jan | 11,798 | 10,973 | 11,681 | 6 |
| Feb | 10,901 | 11,648 | 12,758 | 10 |
| Mar | 10,407 | 10,922 | 10,957 | 0 |
| Apr | 10,168 | 9,535 | 9,886 | 4 |
| May | 11,176 | 9,291 | 10,412 | 12 |
| Jun | 10,796 | 9,673 | 9,969 | 3 |
| Jul | - | - | - | - |

| | | | | |
|-----|--------|--------|--------|---|
| Aug | - | - | - | - |
| Sep | - | - | 11,464 | - |
| Oct | - | - | 12,035 | - |
| Nov | - | 11,397 | 11,411 | 0 |
| Dec | 10,842 | 11,180 | - | - |

Prices for high quality

Source: Agricultural & Fishery Marketing Corporation

Korea: Average Wholesale Prices for Imported Oranges

(Unit: Korean Won per 18 Kilogram box)

| Month | High Quality | | Medium Quality | |
|-------|--------------|--------|----------------|--------|
| | 2016 | 2017 | 2016 | 2017 |
| Jan. | 62,150 | 60,850 | 55,230 | 55,980 |
| Feb. | 61,044 | 62,500 | 54,244 | 57,510 |
| Mar. | 53,191 | 56,927 | 47,000 | 51,564 |
| Apr. | 47,000 | 48,620 | 41,040 | 43,820 |
| May | 43,640 | 50,768 | 37,960 | 45,168 |
| Jun. | 42,862 | 54,411 | 37,462 | 48,861 |
| Jul. | - | - | - | - |
| Aug. | - | - | - | - |
| Sep. | - | 46,147 | - | 41,333 |
| Oct. | - | 47,863 | - | 43,063 |
| Nov. | - | 53,500 | - | 48,609 |
| Dec. | - | - | - | - |

Source: Agricultural & Fishery Marketing Corporation

Korea: Wholesale Prices for Domestic Hallabong & Imported Navel

(Unit: Korean Won per Kilogram)

| Month | Imported Navel 1/ | | Hallabong 2/ | |
|-------|-------------------|-------|--------------|-------|
| | 2016 | 2017 | 2016 | 2017 |
| Jan. | 3,543 | 3,381 | 4,311 | 4,447 |
| Feb. | 3,391 | 3,472 | 4,127 | 3,477 |
| Mar. | 2,955 | 3,163 | 3,000 | 3,158 |
| Apr. | 2,611 | 2,701 | 3,334 | 2,922 |
| May | 2,424 | 2,820 | 5,026 | 2,954 |
| Jun. | 2,381 | 3,023 | 5,250 | 3,056 |

1/ High quality navel oranges

2/ Late variety Unshu oranges

Source: Agricultural & Fishery Marketing Corporation / Jeju Special Self-Governing Province Citrus Marketing & Shipping Association

Korea: Average Wholesale Prices for Imported Lemon
(Unit: Korean Won per 17 Kilograms Box)

| Month | High Quality | | Medium Quality | |
|-------|--------------|--------|----------------|--------|
| | 2016 | 2017 | 2016 | 2017 |
| Jan. | 65,670 | 61,620 | 59,660 | 56,320 |
| Feb. | 63,167 | 61,920 | 57,167 | 56,920 |
| Mar. | 62,127 | 62,818 | 56,673 | 57,818 |
| Apr. | 60,250 | 64,010 | 55,250 | 59,010 |
| May | 55,570 | 70,958 | 50,570 | 65,958 |
| Jun. | 67,895 | 87,286 | 62,057 | 81,410 |
| Jul. | 70,590 | 84,229 | 64,590 | 77,705 |
| Aug. | 66,255 | 72,209 | 60,255 | 64,709 |
| Sep. | 68,821 | 68,819 | 63,242 | 60,476 |
| Oct. | 81,870 | 69,163 | 76,870 | 60,563 |
| Nov. | 78,627 | 68,873 | 73,309 | 61,664 |
| Dec. | 65,276 | - | 59,276 | - |

Source: Agricultural & Fishery Marketing Corporation

Korea: Average Retail Prices for Imported Grapefruit
(Unit: Korean Won per 10 Fruits Box)

| Month | High Quality | | Medium Quality | |
|-------|--------------|--------|----------------|--------|
| | 2016 | 2017 | 2016 | 2017 |
| Jan. | - | - | 13,271 | 17,844 |
| Feb. | - | - | 13,875 | 16,503 |
| Mar. | 9,900 | - | 13,045 | 17,071 |
| Apr. | - | - | 14,260 | 15,777 |
| May | - | - | 15,326 | 15,258 |
| Jun. | - | - | 16,857 | 15,310 |
| Jul. | 17,539 | - | 15,309 | 15,046 |
| Aug. | 17,060 | - | 14,373 | 13,684 |
| Sep. | - | - | 15,070 | 13,494 |
| Oct. | - | 16,230 | 14,510 | 14,267 |
| Nov. | - | - | 13,365 | 15,778 |
| Dec. | - | - | 16,652 | - |

Source: Agricultural & Fishery Marketing Corporation

