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Required Report - public distribution

Date: 12/15/2016

GAIN Report Number: KS1647

Korea - Republic of

Citrus Annual

Citrus Annual

Approved By:

Amanda F. Hinkle

Prepared By:

Sunyoung Choi

Report Highlights:

In crop year 2016/17, South Korean tangerine production is expected to continue a multi-year trend of decreasing quantity and increasing quality. However, the decrease in production is expected to be small (3%), to 615,000 MT. Consumption is forecast to decrease to 542,000 MT, as the industry continues to make changes to adapt to growing market demand for sweeter, larger fruit that can be available at different times of the year. South Korean imports of oranges continue to be dominated by U.S. exports. The volume of orange imports in MY 2016/2017 is expected to decrease to 130,000 MT based on a poor crop production year in California.

Production

In crop year 2016/17 (October – September), Korea’s total Unshu orange production is forecast to decrease by three percent to 615,000 metric tons (MT), a decrease of about 20,000 MT from 635,000 MT the previous year. This decrease is primarily expected to be a result of a decline in production of open field tangerines. Harvested area for open field tangerines has been gradually decreasing; and this year, yields also decreased as unfavorable weather caused an increase in the number of small and damaged fruit.

At the time of the first survey done in May 2016 by the Jeju citrus industry, estimated production of open field tangerines was forecast at 614,000 MT due to increased fruit count per tree. However, current assessments for open field tangerine production are around 500,000 MT in 2016/17, a decrease of about 20,000 MT from the previous crop year, mainly due to decreased harvested area and increased volume of non-marketable fruit. The percentage of non-marketable fruits (which are too large, small, or damaged to be marketable) increased after a summer heat wave caused damage by fruit cracking, and a typhoon in late September caused an increase in rotten and fallen fruits. However, the summer drought also positively impacted open field tangerine production by raising the Brix level (sugar content level). A high Brix level is the top driver of consumer demand.

Due to an increased percentage of non-marketable fruits in crop year 2016/17, Jeju citrus industry estimated in May that about 80,000 MT of fresh tangerines would be used for concentrate processing to maintain the proper retail price, and to segregate off-grade and inferior fruits from the retail market. However, the total volume for concentrate processing will be lower, 70,000 MT, due to an expected reduction of open field tangerine production and an increased tangerine concentrate stock level caused by a fruit juice market that has been shrinking since 2014.

Despite more than a decade of steadily decreasing harvested area and an overall decrease in production of open field tangerines, the production of late variety tangerines has increased over this time period. Farmers have increasingly converted their remaining planted area to growing late varieties such as *Hallabong*, *Cheonhyehyang*, and *Redhyang*, which have higher value. Because these varieties are more competitive with fresh imported oranges, production has risen since 2004 when FTAs with citrus exporting countries began to be implemented. In crop year 2015/16, bolstered by increased production of *Cheonhyehyang* and *Redhyang* cultivars, late variety production increased by 2.4 percent to 67,406 MT, up from 65,800 MT the previous year. *Cheonhyehyang* and *Redhyang* cultivars have a stronger flavor, higher Brix level, and larger size than most other tangerines.

| Crop Year | 2011/12 | 2012/13 | 2013/14 | 2014/15 | 2015/16 |
|-------------------------|----------------|----------------|----------------|----------------|----------------|
| Open field | 500,106 | 558,942 | 554,007 | 573,442 | 519,243 |
| Summer Green House | 21,807 | 19,963 | 19,555 | 21,571 | 20,401 |
| Winter Tangerine | 21,056 | 34,240 | 34,742 | 35,950 | 27,982 |
| Late Variety | 45,085 | 55,465 | 63,963 | 65,800 | 67,406 |
| Total Production | 588,054 | 668,610 | 672,267 | 696,763 | 635,032 |

Source: Jeju Citrus Growers Cooperative

Summer Greenhouse Tangerine

Every year, the Jeju citrus industry produces about 20,000 MT of summer greenhouse tangerines during the May – September period. Although harvested area for greenhouse tangerines continued to decrease, citrus growers maintained stable production because of increased yield rates (production per hectare). In crop year 2003/04, summer greenhouse tangerine production was 25,903 MT grown on 430 Ha. Meanwhile, in crop year 2015/16, despite a harvested area of only 250 Ha, increased yield rates allowed production to reach 20,401 MT. As can be seen, the yield rate was 60.2 MT/Ha in 2003/04, while it increased to 81.6 MT/Ha in 2015/16 as the trees got older.

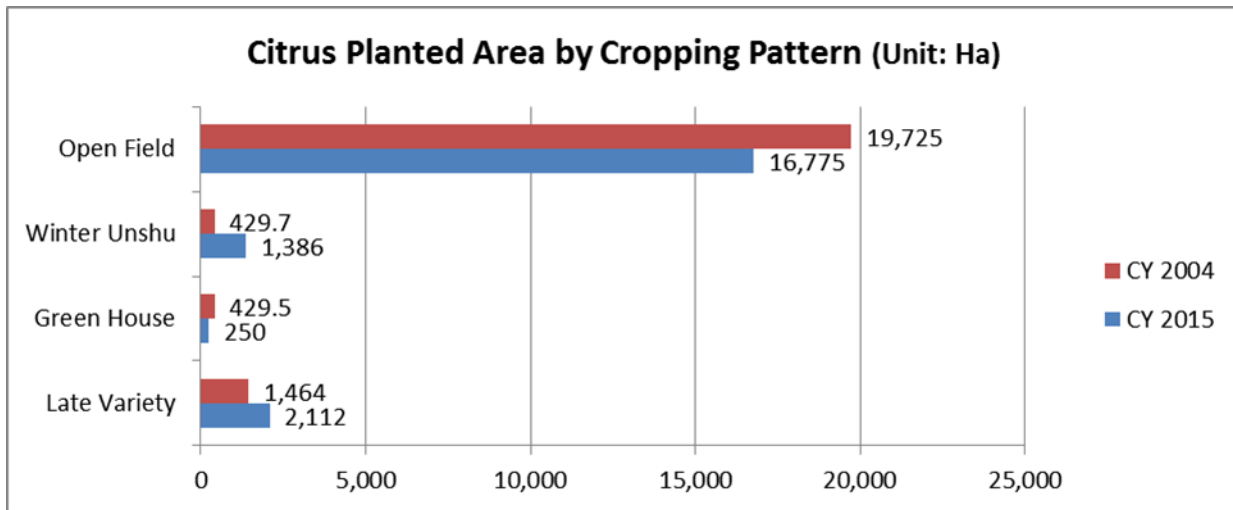
Planted Area

In crop year 2016/17, Korea's planted area for Unshu oranges is expected to be 20,450 hectares (Ha), a slight decrease (0.4 percent) from 20,523 Ha in crop year 2015/16. Planted area is declining mainly due to both the growth of housing developments in the tangerine farming area and a steady rate of closures of farms as the population of the Jeju rural community continues to age.

The majority (82%) of tangerine planted area in Jeju continues to be devoted to open field tangerine production. However, planted area for open field tangerines has decreased by 15 percent (2,950 Ha) over the past 11 years from 19,725 Ha in crop year 2003/4 to 16,775 Ha in crop year 2015/16. Open field tangerine farmers in Jeju suffer from low tangerine quality caused by unfavorable weather conditions (frequent rainfall and typhoons) during the harvest period (October – December period), causing them to shift more open field tangerine area to greenhouse cultivation (mainly late variety) based on the promise of stronger profits and more stable tangerine quality. This trend has led to a significant increase in the area planted with the late variety tangerine (44 percent or 648 Ha) from 1,464 Ha to 2,112 Ha from crop years 2003/4 to 2015/16. Late variety tangerines accounted for about 10 percent of total tangerine area (20,523 Ha) in Jeju in crop year 2015/16.

Jeju tangerine growers have increased planted area for late variety tangerine cultivars, mainly *Hallabong*, *Cheonhyehyang* and *Redhyang*. When Jeju tangerine growers first began producing the late variety tangerine, the majority of growers produced the *Hallabong* cultivar due to the limited variety of options available. Since that time, researchers at the Rural Development Administration and Jeju Agricultural Research and Extension Services have developed additional cultivars. In particular, production of the *Cheonhyehyang* and *Redhyang* cultivars recently increased substantially due to increased consumer demand in the market. These cultivars have been continuously supported by the provincial government since 2004, when Korea began implementing the first of many FTAs. The government supports the producers of these cultivars with facility investment, enabling farmers to increase their profits and better compete with imported fruits.

In crop year 2016/17, planted area for late variety tangerines is expected to increase by 3.6 percent (134 Ha), as planted area for open field tangerines are forecast decrease by 0.8 percent (134 Ha). Meanwhile, The Jeju citrus industry forecasts that the area of protected tangerine cultivation (currently 3,500 Ha) will increase up to 4,000 Ha in the near future, accounting for 20 percent of total tangerine area.



Source:

Jeju Citrus Growers Cooperative

Consumption

The Ministry of Agriculture, Food and Rural Affairs (MAFRA) announced that in 2015, Koreans consumed more fresh citrus (including imported oranges) than other fruit, due to the relatively cheap price per kilogram and the consumer-friendly ability to peel the fruit skin. Of total per capita fruit consumption (66.7 Kg) in 2015, Koreans consume the most fresh citrus (13.2 Kg), followed by apples (9.4 Kg) and table grapes (6.4 Kg).

Korea: Per Capita Fruits Consumption (Unit: Kg)

| Year | Total Fruits | Pears | Apple | Grape | Citrus 1/ | Persimmon | Peach | Other |
|------|--------------|-------|-------|-------|-----------|-----------|-------|-------|
| 2005 | 62.7 | 8.7 | 7.5 | 8.2 | 13.1 | 4.8 | 4.6 | 13.2 |
| 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 |

1/Including imported oranges

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

In crop year 2016/17, consumption is forecast to decrease to 542,000 MT from 547,000 MT in 2015/2016. Despite the popularity of citrus among Koreans, the tangerine industry has difficulty increasing demand because consumers are deterred by the short storage period of the fruit. Additionally, the demand for fresh local tangerines is stagnant because Koreans have recently become accustomed to various imported fruits with higher sugar content (Brix levels) such as oranges, table grapes and mangoes. Many Korean consumers prefer these sweeter fruits, including mangoes and oranges, for dessert. As fresh tangerines are not as sweet as these imported fruits they have difficulty competing. However, open field tangerine production does not compete

with fresh oranges since the main season ends around the end of February, while the late variety competes with imported oranges until the beginning of May. Imports are most competitive at the favorable U.S. - Korea Free Trade Agreement (FTA) duty rate of five percent, which lasts from March 1 – August 30. Thus, demand for higher quality fruit with a higher Brix level is increasing, and the Jeju tangerine industry is responding. Industry cooperatives are assisting farmers with improving quality by implementing tangerine reduction plans with tangerine growers. These plans include practices such as fruit and tree thinning and promoting the use of a sunshine reflecting film on the ground.

In general, the majority of fresh tangerines are distributed through large discount shopping centers or traditional wet markets. However, tangerine sales to tourists visiting Jeju and direct sales between growers and consumers via online markets are growing rapidly. In crop year 2015/16, direct sales to the tourist and online markets increased to 117,162 MT from 77,850 MT the previous year.

Tangerine Concentrate Processing

The Jeju tangerine industry uses about 15 to 20 percent of its fresh tangerine production for concentrate processing annually. This allows the industry to obtain value from the non-marketable fruits (off-grade and inferior fruits) and to maintain the proper market price for the fruits, as it segregates a certain amount of oversupply in production away from the market. In crop year 2016/17, about 70,000 MT of fresh tangerines will be used for concentrate processing. This number is about 14,000 MT lower than the previous year due to the reduced production of open field tangerines and increased tangerine concentrate stock by processors since crop year 2013/14.

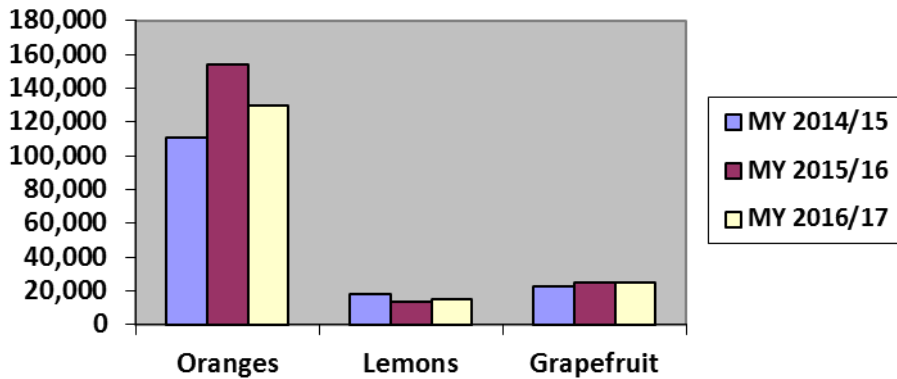
The three main tangerine concentrate processors (Jeju Development Corporation, Ilhae and Lotte) purchase fresh tangerines for concentrate processing at 160 Korean won (KRW) per Kilogram. This price includes 50 KRW per kilogram in financial support provided by the Jeju provincial government.

The use of fresh tangerines for concentrate processing is expected to decrease steadily due to a reduced fruit juice market and the ongoing decrease of open field area for tangerines. In particular, as consumers are increasingly recognizing drinks with high sugar content (mostly fruit and carbonated drinks) as unhealthy, sales of tangerine juice are significantly decreasing.

Trade

Imports

Citrus Imports (MT)



Imports of oranges are expected to decrease slightly, while lemon and grapefruit imports are expected to remain largely unchanged.

Oranges

In Marketing Year (MY) 2016/17, Korea's fresh orange imports are expected to be 130,000 MT, which amounts to an approximately 25,000 MT decrease from the previous year. An anticipated reduction in production (about eight percent decrease) in exporting countries (especially in California, the United States) and increased competition with other imported fruits, such as table grapes and bananas, will contribute to this decline. In MY 2015/16, Korea imported a record high quantity of about 154,000 MT of fresh oranges, mainly due to increased production in California. This number represents a 39 percent increase from 111,000 MT in MY 2014/15. As a result of increased production, the average import unit price also decreased by 8.7 percent from the previous year.

U.S. fresh oranges dominated the Korean market with a 94 percent market share in MY 2015/16, followed by South Africa and Spain, which held 2.8 percent and 1.5 percent market shares, respectively. U.S. oranges will maintain their dominant position in Korea in MY 2016/17 with a favorable FTA duty rate of five percent for calendar year 2017 during the March 1st – August 30th period. Because of the seasonality of the fruit and the effects of the temporal duties from the FTA, a majority of U.S. oranges are imported during the March - April period. In MY 2015/16, Korea imported 115,232 MT of fresh oranges during these two months, accounting for about 75 percent of total orange imports.

Recently, the industry assumes the ratio of premium high Brix-count oranges and regular oranges is half and half in the market. Due to increased consumer demand for high quality oranges for dessert, demand is expected to continue to increase over the next few years.

Lemons

Korea imports about 15,000 MT – 16,000 MT of fresh lemons annually for direct consumption and processing into lemonade. In MY 2016/17, fresh lemon imports are expected to increase to 15,000 MT from 14,000 MT in MY 2015/16 due to the popularity of lemonade during the last summer season, which had exceptionally hot weather. In MY 2015/16, imports decreased by 4,300 MT from the previous year due to reduced supply from Chile caused by cold damage and increased competition with other fresh-squeezed fruit juices during the summer season.

Grapefruit

In MY 2016/17, Korea's grapefruit imports are expected to maintain the level of MY 2015/16 at 25,000 MT with the continued popularity of sweetened citrus drinks and the healthy and diet-conscious image of grapefruit that is appealing to young consumers. In MY 2015/16, the exceptionally hot weather during summer helped to increase the demand for grapefruit-ade, and grapefruit reached its highest ever import volume at 25,119 MT, up from 23,087 MT in MY 2014/15.



Drinks made from fresh grapefruit are popular in Korea. To make them:

- 1- Collect flesh of grapefruit in a jar with lots of sugar.
- 2- Wait until the grapefruit mixture becomes like syrup.
- 3- Dilute it with hot water for tea in the winter or with carbonated water for a grapefruit-ade drink in the summer.

Exports

In crop year 2015/16, Korea's fresh tangerine exports are forecast to be 2,500 MT, slightly lower than the previous year due to reduced open field tangerine production and increased domestic demand. Additionally, favorable domestic retail prices for tangerines for the past two to three years have led tangerine growers to lose interest in the export market.

Frozen Concentrated Orange Juice (FCOJ)

Since MY 2013/14, the frozen fruit juice market has been contracting as a result of increasingly health conscious consumers and increasing competition with fresh-squeezed fruit juice during the summer season. Meanwhile, demand for various other drinks including tea and health functional drinks increased during the same period. In MY 2016/17, Frozen Concentrated Orange Juice (FCOJ) imports are expected to be at a similar level to the previous year (14,800 MT). The fruit juice market is expected to continue to struggle to compete with increased demand for fresh-squeezed fruit juice made of various fresh fruits including imported lemons and grapefruit.

PSD Tables

| Tangerines/Mandarins, Fresh Market Begin Year Korea, Republic of | 2014/2015 | | 2015/2016 | | 2016/2017 | |
|--|---------------|----------|---------------|----------|---------------|----------|
| | Oct 2014 | | Oct 2015 | | Oct 2016 | |
| | USDA Official | New Post | USDA Official | New Post | USDA Official | New Post |
| Area Planted | 20555 | 20555 | 20541 | 20523 | 0 | 20450 |
| Area Harvested | 19322 | 19322 | 19309 | 19292 | 0 | 19223 |
| Bearing Trees | 24153 | 24153 | 24136 | 24115 | 0 | 24029 |
| Non-Bearing Trees | 6680 | 6680 | 6676 | 6670 | 0 | 6646 |
| Total No. Of Trees | 30833 | 30833 | 30812 | 30785 | 0 | 30675 |
| Production | 697 | 697 | 640 | 635 | 0 | 615 |
| Imports | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Supply | 697 | 697 | 640 | 635 | 0 | 615 |
| Exports | 3 | 3 | 3 | 3 | 0 | 3 |
| Fresh Dom. Consumption | 535 | 535 | 542 | 547 | 0 | 542 |
| For Processing | 159 | 159 | 95 | 85 | 0 | 70 |
| Total Distribution | 697 | 697 | 640 | 635 | 0 | 615 |
| (HECTARES) ,(1000 TREES) ,(1000 MT) | | | | | | |

| Oranges, Fresh Market Begin Year Korea, Republic of | 2014/2015 | | 2015/2016 | | 2016/2017 | |
|---|---------------|----------|---------------|----------|---------------|----------|
| | Oct 2014 | | Oct 2015 | | Oct 2016 | |
| | 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 | 111 | 111 | 155 | 154 | 0 | 130 |
| Total Supply | 111 | 111 | 155 | 154 | 0 | 130 |
| Exports | 0 | 0 | 0 | 0 | 0 | 0 |
| Fresh Dom. Consumption | 111 | 111 | 155 | 154 | 0 | 130 |
| For Processing | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Distribution | 111 | 111 | 155 | 154 | 0 | 130 |
| (HECTARES) ,(1000 TREES) ,(1000 MT) | | | | | | |

| Orange Juice Market Begin Year Korea, Republic of | 2014/2015 | | 2015/2016 | | 2016/2017 | |
|---|---------------|----------|---------------|----------|---------------|----------|
| | Oct 2014 | | Oct 2015 | | Oct 2016 | |
| | USDA Official | New Post | USDA Official | New Post | USDA Official | New Post |
| Deliv. To Processors | 158391 | 158371 | 95000 | 84477 | 0 | 70000 |
| Beginning Stocks | 1250 | 1250 | 1634 | 3000 | 0 | 4500 |
| Production | 12663 | 12670 | 7600 | 6758 | 0 | 5600 |
| Imports | 15511 | 10846 | 15000 | 15511 | 0 | 14854 |
| Total Supply | 29424 | 24766 | 24234 | 25269 | 0 | 24954 |
| Exports | 125 | 127 | 150 | 11 | 0 | 50 |
| Domestic Consumption | 27665 | 21639 | 22704 | 20758 | 0 | 20304 |
| Ending Stocks | 1634 | 3000 | 1380 | 4500 | 0 | 4600 |
| Total Distribution | 29424 | 24766 | 24234 | 25269 | 0 | 24954 |
| (MT) | | | | | | |

Production

Korea: Citrus Production Situation 1/

| Year | Area (HA) | Production (MT) | Farm Household | Gross Income (Mil.won) |
|---------|-----------|-----------------|----------------|------------------------|
| 2007 | 20,965 | 747,376 | 31,005 | 431,883 |
| 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 2/ | 20,450 | 625,000 | 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/ |
|------|---------|---------|------------|----------|
| 2007 | 747,376 | 513,746 | 138,782 | 94,948 |
| 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 | 340,453 | 84,477 | 210,202 |

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) |
|------|-----------|-----------------|-------------------------|-----------|----------------|
| 2007 | 359 | 22,895 | 78,013 | 1,048 | 3,407 |
| 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 1/ | 245 | 19,500 | 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 |
|------|-------|
| 2008 | 80 |
| 2009 | 80 |
| 2010 | 120 |
| 2011 | 140 |
| 2012 | 160 |
| 2013 | 160 |
| 2014 | 160 |
| 2015 | 160 |
| 2016 | 160 |

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 |
|------|--------------|--------|-------|
| 2001 | 2,284 | 646 | 28.0 |
| 2002 | 2,418 | 789 | 32.0 |
| 2003 | 2,275 | 632 | 27.0 |
| 2004 | 2,411 | 584 | 24.0 |
| 2005 | 2,593 | 638 | 24.0 |
| 2006 | 2,504 | 620 | 24.0 |
| 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 |

Source: Korea Statistical Information Service (KOSIS)

Korea: Total Fruits and Citrus Per Capita Consumption

| Year | Total Fruits | Total Tangerine 1/ |
|------|--------------|--------------------|
| 2007 | 67.9 Kg | 16.0 Kg |
| 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 |

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 |
| 2014 | 57,017 | 50 | 50 |
| 2015 | 57,017 | 50 | 50 |
| 2016 | 57,017 | 50 | 50 |
| 2017 | 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 |
| 2014 | 2,097 | 50 | 144 |
| 2015 | 2,097 | 50 | 144 |
| 2016 | 2,097 | 50 | 144 |
| 2017 | 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 | 2015 | 2016 | 2017 |
|-------------------|-------------|-----------|-------|-------|-------|
| 0805100000 | Oranges | | | | |
| March1 – end Aug | | 50 | 15 | 10 | 5 |
| Sept 1 – end Feb | | | | | |
| TRQ (MT) | | | 2,732 | 2,814 | 2,898 |
| 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 |
|------|-------|--------|--------|--------|--------|-------|-------|-------|-------|-------|-------|-------|
| '16 | 5,210 | 10,830 | 68,324 | 46,908 | 9,719 | 1,780 | 2,340 | 2,275 | 2,166 | - | - | - |
| '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 |
| '10 | 4,854 | 9,083 | 29,267 | 39,841 | 14,309 | 3,201 | 976 | 1,061 | 2,252 | 1,314 | 1,166 | 2,734 |

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 2014/15 (Oct. 14 – Sep. 15) | | MY 2015/16 (Oct. 15 – Sep. 16) | |
| | Volume | Value | Volume | Value |
| U.S. | 102,775 | 162,851 | 144,448 | 206,954 |
| Others | | | | |
| South Africa | 3,892 | 4,021 | 4,339 | 4,548 |
| Australia | 856 | 1,527 | 1,290 | 2,265 |
| Spain | 2,109 | 2,163 | 2,297 | 2,549 |
| Chile | 1,423 | 1,983 | 1,679 | 2,275 |
| Other | 0 | 0 | | |

| | | | | |
|------------------|---------|---------|---------|---------|
| | | | | |
| Total for Others | 8,280 | 9,694 | 9,605 | 11,637 |
| Grand Total | 111,057 | 172,545 | 154,043 | 218,591 |

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 2014/15 (Oct. 14 – Sep. 15) | | MY 2015/16 (Oct. 15 – Sep. 16) | |
| Country | Volume | Value | Volume | Value |
| U.S. | 13,828 | 35,504 | 12,006 | 28,134 |
| Others | | | | |
| Chile | 4,472 | 11,126 | 1,994 | 4,246 |
| Other | 0 | 0 | 3 | 30 |
| | | | | |
| Total for Others | 4,472 | 11,126 | 1,997 | 4,277 |
| Grand Total | 18,300 | 46,630 | 14,003 | 32,410 |

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 2014/15 (Oct. 14 – Sep. 15) | | MY 2015/16 (Oct. 15 – Sep. 16) | |
| Country | Volume | Value | Volume | Value |
| U.S. | 12,491 | 16,290 | 13,224 | 18369 |
| Others | | | | |
| Israel | 2,765 | 3,110 | 3,223 | 3595 |
| S. Africa | 7,831 | 7,776 | 8,662 | 10583 |
| Mexico | 0 | 0 | 11 | 15 |
| | | | | |
| Total for Others | 10,596 | 10,886 | 11,896 | 14193 |
| Grand Total | 23,087 | 27,175 | 25,119 | 32562 |

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 2014/15 (Oct. 14 – Sep. 15) | | MY 2015/16 (Oct. 15 – Sep. 16) | |
| Country | Volume | Value | Volume | Value |
| U.S. | 646 | 991 | 491 | 685 |
| Others | | | | |
| Russia | 527 | 439 | 412 | 339 |
| Canada | 847 | 775 | 953 | 815 |
| Japan | 1 | 8 | 0 | 0 |
| Hong Kong | 111 | 190 | 149 | 270 |
| Guam | 83 | 135 | 90 | 181 |
| Indonesia | 37 | 62 | 12 | 27 |
| Malaysia | 40 | 54 | 3 | 16 |
| United Kingdom | 507 | 756 | 342 | 545 |
| Mongolia | 179 | 255 | 157 | 179 |
| Singapore | 125 | 208 | 185 | 277 |
| Others | 38 | 79 | 58 | 135 |
| | | | | |
| Total for Others | 2,495 | 2,961 | 2,361 | 2,784 |
| Grand Total | 3,141 | 3,952 | 2,852 | 3,469 |

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 2014/15 (Oct. 14 – Sep. 15) | | MY 2015/16 (Oct. 15 – Sep. 16) | |
| Country | Volume | Value | Volume | Value |
| U.S. | 10,846 | 29,615 | 6,561 | 16,475 |
| Others | | | | |
| Spain | 2,251 | 2,375 | 1,826 | 2,724 |
| Turkey | 93 | 300 | 160 | 555 |

| | | | | |
|------------------|--------|--------|--------|--------|
| Brazil | 213 | 483 | 4,333 | 8,042 |
| Australia | 624 | 918 | 812 | 1,199 |
| Israel | 129 | 272 | 69 | 133 |
| Greece | 535 | 1,042 | 230 | 290 |
| Canada | 19 | 77 | 18 | 74 |
| U.K. | 16 | 42 | 8 | 18 |
| Taiwan | 34 | 104 | 45 | 145 |
| Italy | 70 | 165 | 84 | 200 |
| Other | 681 | 1,005 | 708 | 1,144 |
| | | | | |
| Total for Others | 4,665 | 6,783 | 8,293 | 14524 |
| Grand Total | 15,511 | 36,398 | 14,854 | 30,999 |

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 2014/15 (Oct. 14 – Sep. 15) | | MY 2015/16 (Oct. 15 – Sep. 16) | |
| Country | Volume | Value | Volume | Value |
| U.S. | 2 | 2 | 2 | 2 |
| Others | | | | |
| Japan | 10 | 59 | 0 | 0 |
| Netherland | 0 | 0 | 0 | 0 |
| Israel | 0 | 0 | 0 | 0 |
| PRC | 6 | 18 | 1 | 3 |
| Denmark | 0 | 0 | 0 | 0 |
| Singapore | 0 | 0 | 0 | 0 |
| Hong Kong | 6 | 9 | 4 | 6 |
| Canada | 1 | 1 | 0 | 0 |
| Philippines | 1 | 2 | 0 | 0 |
| Mongolia | 0 | 0 | 2 | 6 |
| Greece | 24 | 44 | 0 | 0 |
| Other | 77 | 66 | 4 | 5 |
| | | | | |
| Total for Others | 125 | 199 | 11 | 20 |
| Grand Total | 127 | 201 | 13 | 22 |

Source: Korea International Trade Association

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

| Month | 2014 | 2015 | 2016 |
|-------|---------|---------|---------|
| Jan. | 1064.75 | 1088.86 | 1201.67 |
| Feb. | 1071.30 | 1098.40 | 1217.35 |
| Mar. | 1070.89 | 1112.57 | 1188.21 |
| Apr. | 1044.55 | 1088.66 | 1147.51 |
| May | 1024.99 | 1091.27 | 1171.51 |
| Jun. | 1019.36 | 1112.20 | 1170.50 |
| Jul. | 1019.93 | 1143.22 | 1144.09 |
| Aug. | 1025.36 | 1179.10 | 1111.68 |
| Sep. | 1033.24 | 1184.76 | 1107.49 |
| Oct. | 1060.28 | 1148.18 | 1125.28 |
| Nov. | 1095.10 | 1151.97 | - |
| Dec. | 1104.33 | 1172.24 | - |

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 | |
|------------------------|--------------|--------|----------------|--------|
| | 2015 | 2016 | 2015 | 2016 |
| Jan. | 17,210 | 16,020 | 13,695 | 12,970 |
| Feb. | 17,129 | 25,767 | 13,529 | 22,022 |
| Mar. | 22,457 | 31,154 | 17,781 | 26,246 |
| April - September: N/A | | | | |
| Oct. | 19,036 | 22,307 | 15,709 | 17,707 |
| Nov. | 17,362 | - | 14,314 | - |
| Dec. | 16,610 | - | 13,552 | - |

Source: Agricultural & Fishery Marketing Corporation Korea: Average Wholesale

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

| Month | 2015 | 2016 |
|-------|--------|--------|
| May | 21,245 | 23,328 |
| Jun. | 17,106 | 19,071 |
| Jul. | 13,729 | 15,313 |
| Aug. | 13,815 | 16,382 |
| Sep. | 13,012 | 13,429 |
| Oct. | 7,777 | 8,224 |
| Nov. | 5,706 | - |

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, Approximately 100 gram per fruit)

| Year Month | 2014 | 2015 | 2016 | % Change from the previous year |
|---------------|-------|-------|-------|---------------------------------|
| Jan | 2,730 | 2,422 | 2,212 | -8.7 |
| Feb | 2,919 | 2,410 | 2,913 | 20.9 |
| Mar | 2,996 | 3,062 | 3,256 | 6.3 |
| Oct | 2,625 | 3,376 | 3,668 | 8.6 |
| Nov | 2,395 | 2,313 | - | - |
| Dec | 2,413 | 2,145 | - | - |

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 | 2014 | 2015 | 2016 | % Change from the previous year |
|---------------|--------|--------|--------|---------------------------------|
| Jan | 10,745 | 11,798 | 10,973 | -7 |
| Feb | 10,954 | 10,901 | 11,648 | 6.9 |
| Mar | 10,961 | 10,407 | 10,922 | 4.9 |
| Apr | 10,815 | 10,168 | 9,535 | -6.2 |
| May | 10,896 | 11,176 | 9,291 | -16.9 |
| Jun | 11,048 | 10,796 | 9,673 | -10.4 |
| Jul | - | - | - | - |
| Aug | - | - | - | - |
| Sep | - | - | - | - |
| Oct | - | - | - | - |
| Nov | 12,000 | - | - | - |
| Dec | 11,902 | 10,842 | - | - |

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 | |
|-------|--------------|--------|----------------|--------|
| | 2015 | 2016 | 2015 | 2016 |
| Jan. | 57,286 | 62,150 | 52,286 | 55,230 |
| Feb. | 58,871 | 61,044 | 53,118 | 54,244 |
| Mar. | 51,909 | 53,191 | 46,555 | 47,000 |
| Apr. | 49,036 | 47,000 | 43,227 | 41,040 |
| May | 57,711 | 43,640 | 51,078 | 37,960 |
| Jun. | 57,620 | 42,862 | 50,830 | 37,462 |
| Jul. | - | - | - | - |
| Aug. | - | - | - | - |
| Sep. | - | - | - | - |
| Oct. | - | - | - | - |
| Nov. | - | - | - | - |
| Dec. | 63,233 | - | 56,633 | - |

Source: Agricultural & Fishery Marketing Corporation

Korea: Wholesale Prices for Domestic Hallabong & Imported Navel
(Unit: Korean Won per Kilogram)

| Month | Imported Navel 1/ | | Hallabong 2/ | |
|-------|-------------------|-------|--------------|-------|
| | 2015 | 2016 | 2015 | 2016 |
| Jan. | 3,183 | 3,543 | 3,965 | 4,311 |
| Feb. | 3,271 | 3,391 | 4,311 | 4,127 |
| Mar. | 2,884 | 2,955 | 3,104 | 3,000 |
| Apr. | 2,724 | 2,611 | 3,252 | 3,334 |
| May | 3,206 | 2,424 | 3,375 | 5,026 |
| Jun. | 3,201 | 2,381 | - | - |

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 | |
|-------|--------------|--------|----------------|--------|
| | 2015 | 2016 | 2015 | 2016 |
| Jan. | - | 65,670 | - | 59,660 |

| | | | | |
|------|--------|--------|--------|--------|
| Feb. | - | 63,167 | - | 57,167 |
| Mar. | - | 62,127 | - | 56,673 |
| Apr. | - | 60,250 | - | 55,250 |
| May | - | 55,570 | - | 50,570 |
| Jun. | 78,282 | 67,895 | 70,282 | 62,057 |
| Jul. | 83,991 | 70,590 | 75,557 | 64,590 |
| Aug. | 75,270 | 66,255 | 67,300 | 60,255 |
| Sep. | 70,410 | 68,821 | 62,410 | 63,242 |
| Oct. | 61,438 | 81,870 | 54,686 | 76,870 |
| Nov. | 58,105 | - | 51,190 | - |
| Dec. | 70,352 | | 62,533 | |

Source: Agricultural & Fishery Marketing Corporation

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

| Month | High Quality | | Medium Quality | |
|-------|--------------|--------|----------------|--------|
| | 2015 | 2016 | 2015 | 2016 |
| Jan. | - | - | 15,351 | 13,271 |
| Feb. | - | - | 14,855 | 13,875 |
| Mar. | - | - | 14,347 | 13,045 |
| Apr. | - | - | 15,201 | 14,260 |
| May | - | - | 15,024 | 15,326 |
| Jun. | - | - | 13,756 | 16,857 |
| Jul. | - | 17,539 | 13,269 | 15,309 |
| Aug. | - | 17,060 | 11,450 | 14,373 |
| Sep. | - | - | 12,313 | 15,070 |
| Oct. | - | - | 12,075 | 14,510 |
| Nov. | - | | 12,393 | - |
| Dec. | - | | 13,502 | - |

Source: Agricultural & Fishery Marketing Corporation