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Poor Weather Decreases Apple Production

Report Categories:

Fresh Deciduous Fruit

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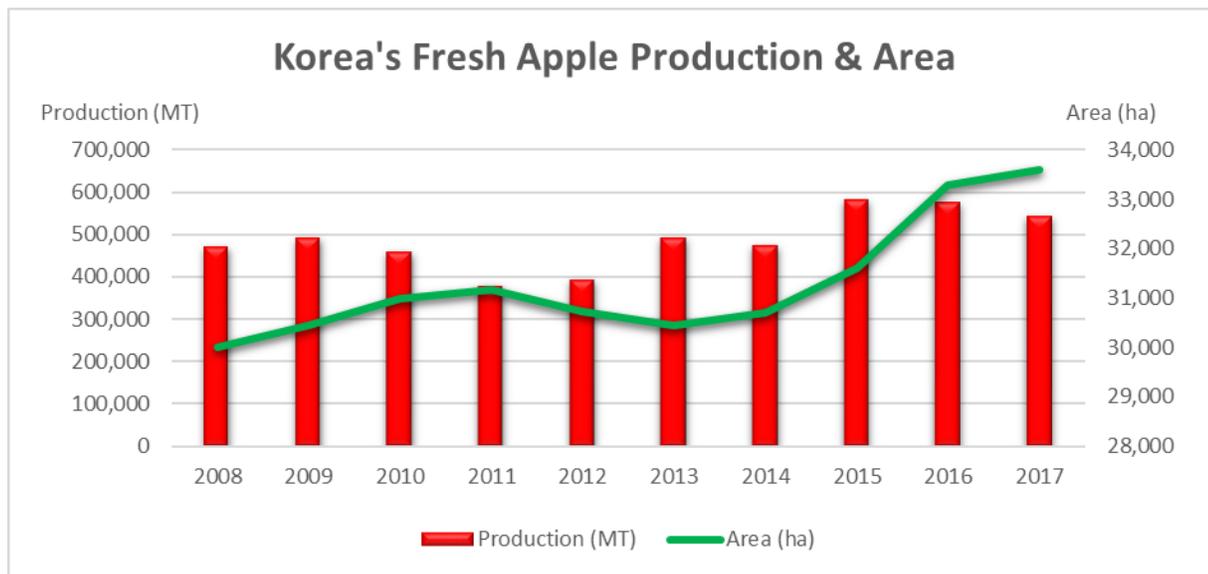
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Report Highlights:

Due to bad weather during the flowering and fruit growing seasons, Korean fresh apple production is projected to decrease by 14 percent to 467,800 metric tons (MT) in Marketing Year (MY) 2018/19. Meanwhile, the area where apples are grown continues to shift northward in response to localized effects of climate change. Consumption is expected to decrease in line with a decline in production and the concomitant rise in product pricing.

Production

In Marketing Year (MY) 2018/19 (July-June), Korean fresh apple production is projected to have dropped by 14 percent to 467,800 metric tons (MT) from 545,349 MT in MY 2017/2018, due to two reasons: 1) cold damage during the flowering season in April, and 2) heat damage during the fruit growing season in July and August. Because of these poor weather conditions, there were fewer large-size apples and a reduced number of apples per tree than during the previous marketing year. On a positive note, the apple industry has also seen a lower percentage of malformed apples than the previous marketing year due to a lower incidence of pests and less typhoon damage during the fruit-growing season.



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

In MY 2017/18, Korea's apple production decreased 5.4 percent (31,020 MT) to 545,349 MT from 576,369 MT in MY 2016/17. Gyeongsangbuk-do province, which produces about 62 percent of total domestic apples, experienced a large decrease in production due to hail damage during the apple growing season in early June 2017. Thus, apple production in Gyeongsangbuk-do province decreased 8.1 percent to 338,034 MT in MY 2017/2018 from 367,710 MT in MY 2016/17, while other provinces maintained apple production at 207,000 MT in MY 2017/18.

Because of climate change including warmer temperatures moving northward, apple farming areas in the southern part of Gyeongsangbuk-do province are shrink as orchards will gradually be planted in northern areas including Gangwon-do and Chooncheong-do provinces in the coming years. Indeed, this is already happening, as fresh apple production in Gangwon-do province, located in the northeastern area of the Republic of Korea, increased 115 percent to 5,550 MT over the past five marketing years (MY 2013/14 – MY 2017/18). This increased production has been a function of expanded area planted to apple trees as a reflection of more favorable growing conditions brought about by climate change and policy support from the provincial government.

Annual Apple Production in Gangwon-do Province					
	2013/14	2014/15	2015/16	2016/17	2017/18
Area (ha)	516	522	721	831	930
Production (MT)	2,578	225	4,472	5,778	5,550

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

Apple Farming Area

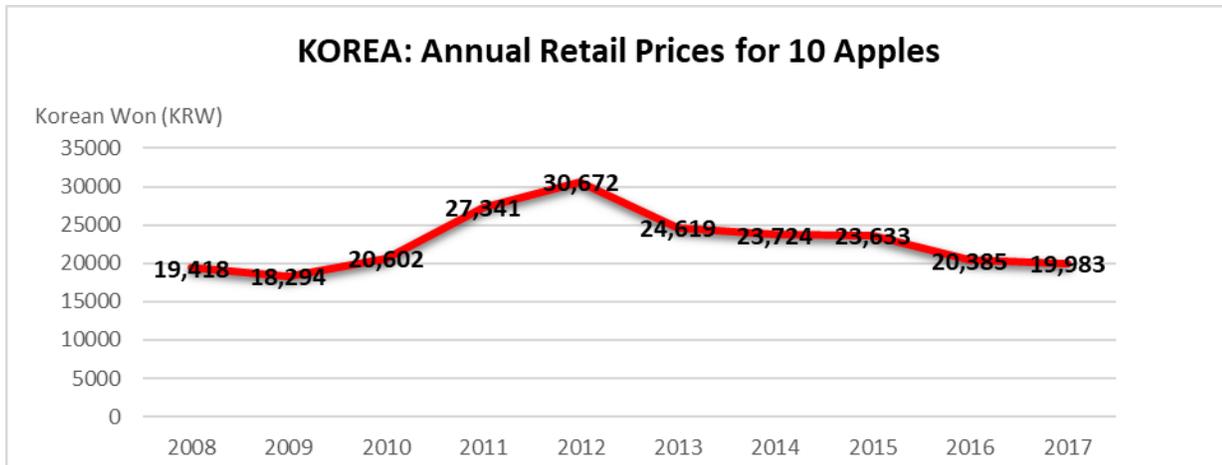
In MY 2018/19, Korea's apple planted area is projected to have decreased slightly to 33,234 ha, about a 1.1 percent decline from the previous marketing year. This is mainly because the apple production area in Gyeongsangbuk-do, the main apple production area, is expected to be cut by two percent as a reflection of changing weather caused by global warming. Meanwhile, Gangwon-do and Jeollabuk-do provinces are expected to increase production area by 1.8 percent and 4.7 percent respectively, as a result of provincial farming strategies to move apple production areas north to respond to new weather patterns caused by changing climatic conditions. The Korean apple industry expects that the primary apple production area will continue moving upward to Gangwon-do and Choongcheong-do provinces in the coming years.

Table 1. Korea's Apple Area by Province (Unit: Hectare)

Province	MY 2016/17	MY 2017/18	MY 2018/19	Change (%)
	Cultivated Area (ha)	Cultivated Area (ha)	Cultivated Area (ha)	
Gangwon-do	831	930	947	1.8
Chungcheongbuk-do	4,087	4,024	4,056	0.8
Chungcheongnam-do	1,600	1,574	1,437	-8.7
Gyeongsangbuk-do	20,083	20,178	19,780	-2
Gyeongsangnam-do	3,339	3,387	3,374	-0.4
Jeollabuk-do	2,360	2,525	2,643	4.7
Other Provinces-do	1,000	982	997	1.5
Total	33,300	33,601	33,234	-1.1

Source: Korea Statistics

Among apple growing areas, Gyeongsangbuk-do produced the most apples, covering 60 percent (19,780 ha) of total apple area (33,234 ha) in MY 2018/19. On an area basis, Chungcheongbuk-do and Gyeongsangnam-do are the second and third largest provinces for apple production with 12 percent (4,056 ha) and ten percent (3,234 ha) of total apple area in MY 2018/19.



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

Korea's apple growing areas for the past five years (MY 2013/14 – MY 2017/18) increased steadily by 10.4 percent to 33,601 hectares in MY 2017/18 from 30,449 hectares in MY 2013/14 due mainly to new planting spurred by higher gross income per unit area than other fruits. However, the apple growing area is expected to decrease gradually in the coming years due to reduced market (retail & wholesale) prices caused by an increase in apple supply and fruit imports.

Consumption

Korea's per capita apple consumption in 2017 reached 10.5 kilograms, making apples the second most consumed fruit in Korea, after citrus (11.6 kg). In 2018, the per capita consumption of apples is expected to decrease to 9.4 Kilograms mainly due to decreased apple supply caused by the aforementioned poor weather conditions during the flowering and fruit growing seasons.

Korea's apple industry forecasts that demand for small and medium-size apples, which weigh between 51 and 250 grams, is expected to increase steadily in the coming years due to a continued increase in the number of single-member households in Korea. Large-size apples (weighing between 251 and 300 grams) are expected to be used mainly for gift-giving during the two traditional Korean holidays (the lunar New Year's Day & the Korean Thanksgiving Day).

Korea: Per Capita Fruit Consumption (Unit: Kg)								
Year	Total Fruits	Apple	Pear	Peach	Grape	Persimmon	Citrus	Others
2013	59.6	9.7	5.2	3.8	6.3	3.0	13.4	18.0
2014	61.8	9.3	5.5	4.1	6.5	3.0	14.2	19.2
2015	59.8	11.4	4.7	3.0	5.7	2.9	12.5	19.6
2016	60.6	11.2	4.1	4.0	5.4	2.3	11.9	21.7
2017	61.2	10.5	4.6	4.3	4.7	2.1	11.6	23.4

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

Due to the ten percent increase in apple production to 545,349 MT in MY 2017/18 from 493,701 MT in MY 2013/14, the annual average retail price decreased to KRW 19,983 per 10 apples from KRW 24,619 during the same period.

Processed Apples

Generally, the Korean apple industry uses non-marketable apples to make apple juice and drinks. In MY 2018/19, the quantity of fresh apples used for processing is expected to be around 25,000 MT due to the reduced apple juice market and increased fresh apple prices caused by reduced domestic apple production. In 2015, about 57,000 MT of apples were used for processing, the highest processing level since 2000. However, fresh apples for processing decreased sharply to 23,200 MT in 2016, due to increased apple concentrate inventory caused by decreased demand for apple juice in a stagnant fruit juice market in Korea.

Korea's Apple Volume for Processing (MT, %)						
Year	2011	2012	2013	2014	2015	2016
Volume (MT)	36,594	38,566	35,559	40,151	57,439	23,200
Production to Processing Ratio (%)	9.6	9.8	7.2	8.5	9.9	4.0

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

Trade

Exports

As fresh apples can be sold in the local market at a more profitable price than when they are exported, not many Korean apple farmers are focused on the export market. Annual fresh apple exports account for about one percent of total production. In marketing year 2017/18, Korea exported 2,901 MT of fresh apples. Taiwan is the biggest export market for Korean fresh apples with a 56 percent share (1,639 MT), followed by Vietnam with 14 percent. Korean fresh apple exports to Vietnam for the past three years increased 41 percent to 418 MT in MY 2017/18 from 296 MT in MY 2016/17 due to increased demand for Korean fresh fruits, including pears and strawberries, with the continuing popularity of Korean culture.

Imports

To date, no fresh apple imports are allowed under Korea's phytosanitary regulations.