

Required Report: Required - Public Distribution

Date: June 17, 2022

Report Number: TU2022-0029

Report Name: Citrus Semi-annual

Country: Turkey

Post: Ankara

Report Category: Citrus

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Report Highlights:

Turkey's citrus production for MY 2021/22 is forecasted up year-over-year in large part due to improved weather conditions compared to the previous year's hot weather. While production is up, growers are seeing profit margins shrink as input costs, such as fuel and fertilizer, increase at a faster clip than farm gate prices. To cut losses, some grapefruit, orange and mandarin growers opted to leave their crops unharvested. With the exception of oranges, more than 50 percent of Turkey's citrus production is expected to be exported in MY 2021/22. Looking ahead to MY 2022/23, citrus production will likely decline because of freezing weather that damaged blossoms in March of this year.

Oranges, Fresh

Production:

For MY 2021/22, the orange production forecast is trimmed back slightly to 1.75 million metric tons (MMT), based on the latest industry production estimates. Year-over-year production levels are up by nearly one-third due in large part to favorable weather conditions in the Mediterranean region, which accounts for 80-85 percent of the country's orange production.

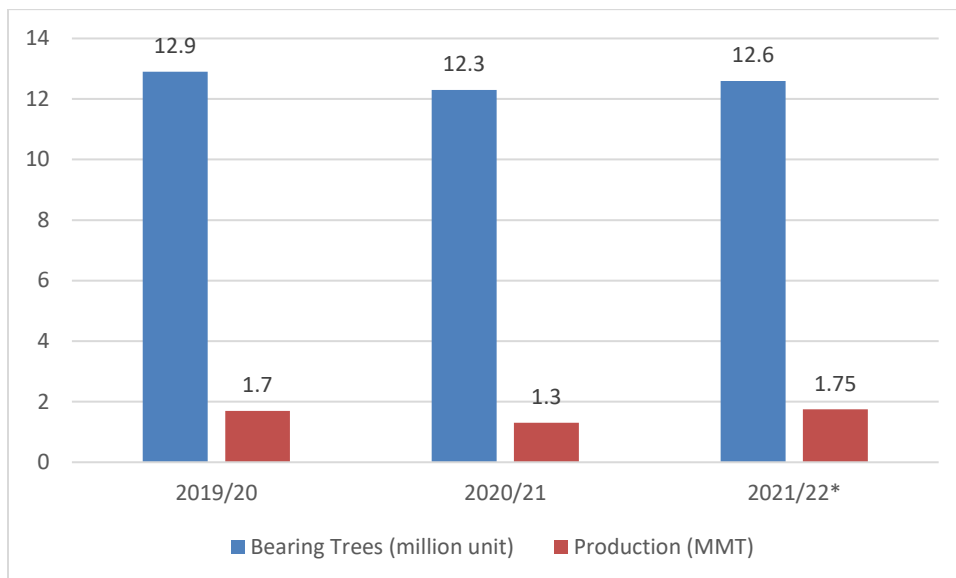
The MY 2020/21 orange production estimate remains unchanged at 1.3 MMT. Production levels during this period dropped because of intense hot weather during tree blooming and a decline in the number of bearing trees. One alleged reason orange production was more affected by the drought than other citrus was because growers gave more care to their higher profit-generating tangerines, lemons, and grapefruits for export. About one-quarter of orange production is exported, whereas more than 50 percent of tangerine, lemon, and grapefruit production is exported.

Looking ahead to MY 2022/23, orange and other citrus growers are concerned that freezing weather conditions in March 2022 will affect production and export levels. The freezing weather reportedly caused serious blossom damage, including at some orchards with wind machines.

Like other Turkish farmers, citrus growers are dealing with rising input costs for fuel, electricity, fertilizer, and crop protectants. Growers have been especially hit hard by higher fertilizer and diesel prices. The price of fertilizer is up 350 percent from last year. Meantime, the price of diesel is 21.2 TL/liter (\$1.24/liter), up a little more than 220 percent from a year ago. Citrus growers primarily use diesel to power wind machines to circulate warm air in their orchards during the colder months to avoid freeze damage.

According to local growers, the production of oranges and other citrus varieties are increasingly vulnerable to the effects of climate change, including excessive heat, drought, and colder temperatures.

Figure 1. Turkey Orange Production (MMT) vs Bearing Trees (million unit) MY 2019/20- MY 2020/21 and MY 2021/22 Comparison



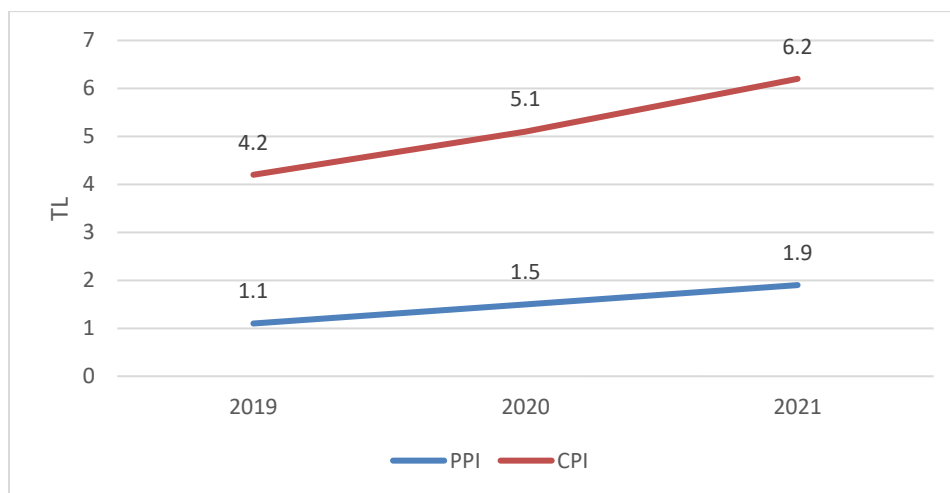
Source: TurkSTAT, 2022. * Post estimate.

Consumption:

The MY 2021/22 orange consumption forecast is adjusted downward to 1.28 MMT, down from the official USDA forecast by a little more than 200,000 MT, but still up year-over-year. Consumption is lower than originally forecast because of smaller production volumes, higher retail prices, and increased exports. The average retail price for oranges is about three times more than the farm gate price. This price difference is attributed to middlemen marking up the prices as the product makes its way to retail shelves. Other citrus also faces large price differences between farm gate and retail prices for the same reason.

The MY 2020/21 consumption estimate remains unchanged at a little more than 1.0 MMT. Consumption during the winter months of MY 2020/21 started off strong as health-conscious consumers were interested in increasing vitamin C consumption amid the pandemic. However, consumption later softened due to reduced domestic supplies and rising prices.

Figure 2. Orange Producers Price Index (PPI) vs Consumer Price Index (CPI) for Oranges, 2019-21 Comparison



Source: TurkSTAT, 2022. (1 USD equals to 17.21 Turkish Lira as of June 14, 2022)

Trade:

Exports

The MY 2021/22 orange export figure is raised to 400,000 MT, up from the official USDA forecast by 135,000 MT. This increase is based on the anticipated expansion in orange production and strong export demand, especially from Iraq.

Orange exports during the first six months of the current marketing year (Oct-Mar) were up 90 percent compared to the same period last year. Iraq, Russia, and Ukraine are the leading export destinations. There was a surge in orange exports to Iraq. Shipments to Iraq skyrocketed 470 percent during this six-month period, vaulting Iraq into the number one destination for Turkish oranges. Iraq is expected to remain in this position for the rest of the year as this year's shipping season is finished.

Exports to Russia during this period (Oct-Mar) dropped by a little more than 25 percent from the previous year after Russia stopped shipments in February and March of this year due to pesticide residue concerns. Meantime, citrus shipments to Russia and Ukraine have also been complicated in recent months because of the war in Ukraine. Payments for citrus sales to Russia have reportedly been delayed because of banking challenges.

As of January 2022, to address pesticide residue concerns, the European countries started requiring a conformity certificate for Turkish oranges. To qualify for a conformity certificate, shipments must be tested for certain residues prior to export. This new requirement is said to add extra costs to the export business. Turkish orange exports to the UK are now subject to increased testing for pesticides on arrival. The rate of testing by shipment is now 50 percent.

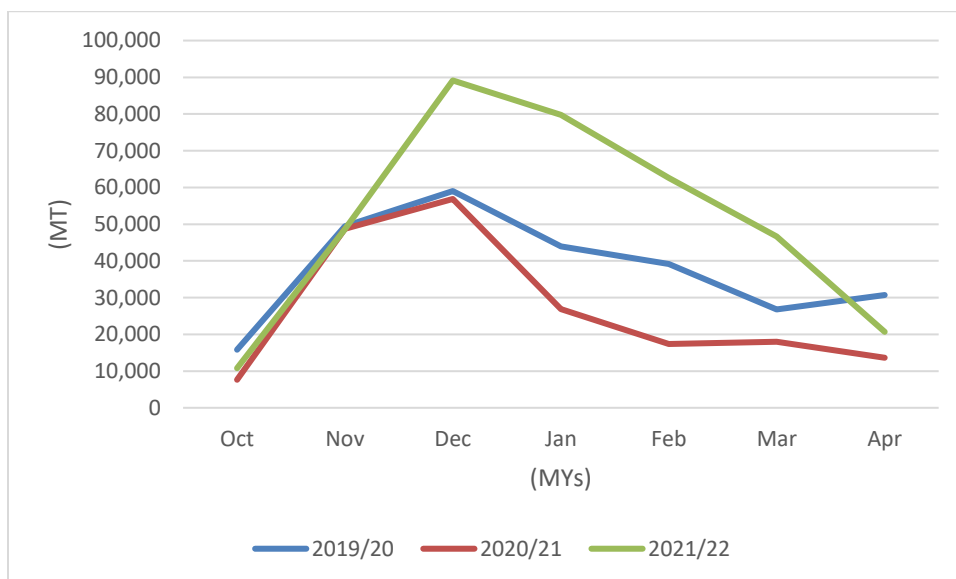
Oranges, lemons, and tangerines are among the [list of products](#) that the Ministry of Agriculture & Forestry (MinAF) may decide to restrict from export to stabilize the market during 2022. In January 2022, MinAF was given the authority to stop certain agricultural exports, as needed, to ensure sufficient domestic supplies and to keep prices from climbing higher.

In MY 2020/21, Turkey exported about 220,000 MT of oranges, which was down 24 percent from the previous year. The decline in export volumes was due to lower production volumes and export restrictions that MinAF imposed at the beginning of 2021 to avoid possible domestic shortfalls during covid.

Imports

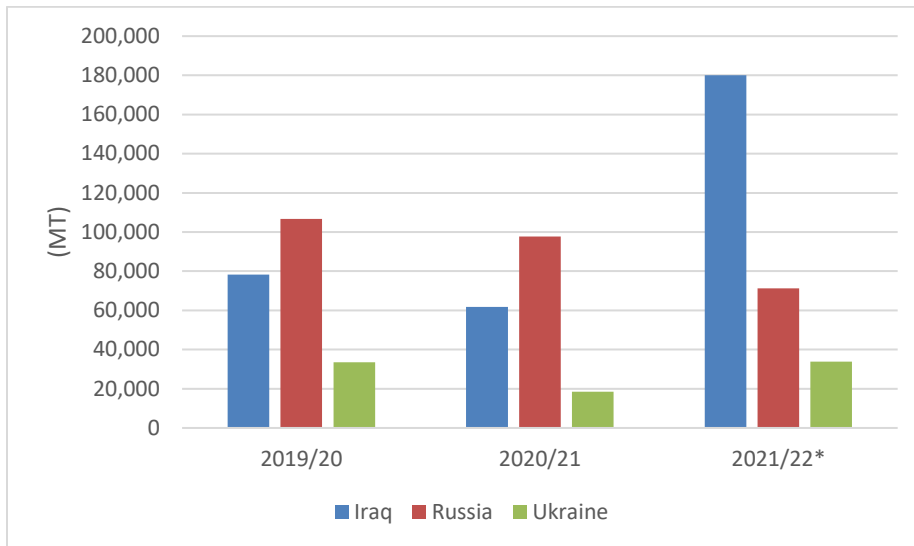
The MY 2021/22 import forecast is adjusted slightly downward to 40,000 MT due to increased domestic production. During the previous marketing year, Turkey imported nearly 44,000 MT of oranges, nearly all of which came from the Turkish Republic of Northern Cyprus (TRNC). Turkey's orange import volumes have remained steady in recent years, but occasionally fluctuate from year-to-year based on domestic production levels.

Figure 3. Turkish Orange Exports, Comparison Table for MY 2019/20, MY 2020/21 and MY 2021/22 monthly



Sources: Trade Data Monitor, LLC

Figure 4. Turkey’s Biggest Export Markets for Oranges, MT



Sources: Trade Data Monitor, LLC. * Data includes exports Oct-April.

Production, Supply and Distribution Statistics:

Table 1: PSD Oranges, Fresh

Oranges, Fresh	2019/2020		2020/2021		2021/2022	
	Oct 2019		Oct 2020		Oct 2021	
	USDA Official	New Post	USDA Official	New Post	USDA Official	New Post
Market Year Begins						
Turkey						
Area Planted (HECTARES)	50446	50446	46012	46012	49000	48176
Area Harvested (HECTARES)	50000	50000	46000	46000	48000	48176
Bearing Trees (1000 TREES)	12985	12985	12306	12306	12400	12620
Non-Bearing Trees (1000 TREES)	866	866	1052	1052	1000	1210
Total No. Of Trees (1000 TREES)	13851	13851	13358	13358	13400	13830
Production (1000 MT)	1700	1700	1300	1300	1820	1750
Imports (1000 MT)	49	49	43	43	43	40
Total Supply (1000 MT)	1749	1749	1343	1343	1863	1793
Exports (1000 MT)	292	292	220	220	265	400
Fresh Dom. Consumption (1000 MT)	1347	1347	1018	1018	1488	1283
For Processing (1000 MT)	110	110	105	105	110	110

Total Distribution (1000 MT)	1749	1749	1343	1343	1863	1793
(HECTARES) ,(1000 TREES) ,(1000 MT)						

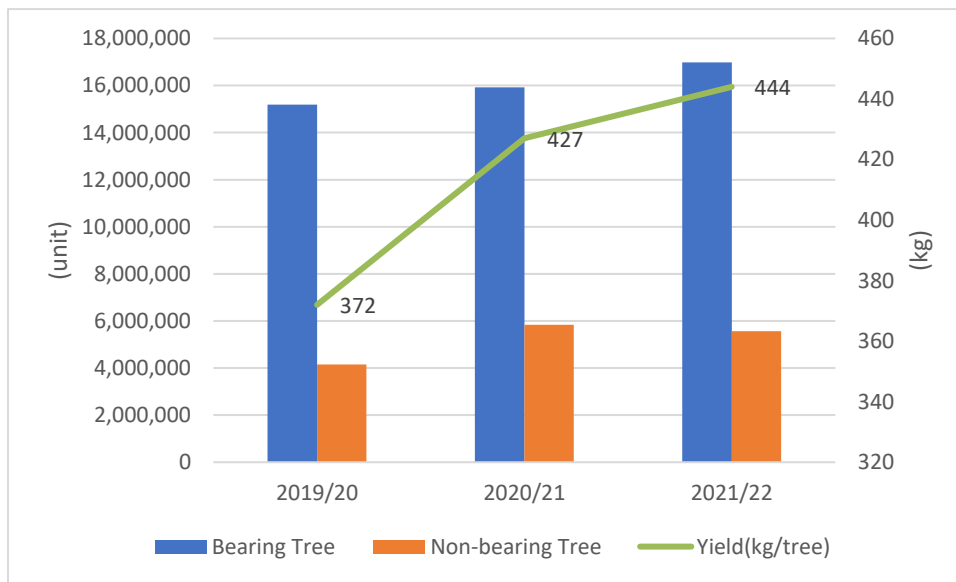
Tangerines/Mandarins, Fresh

Production:

The MY 2021/22 mandarin production figure is forecast at 1.81 MMT, slightly above the official USDA estimate and up year-over-year by more than 200,000 MT, or 14 percent. The upward revision is based on an increase in the number of bearing trees and better yields resulting from favorable weather conditions in the Mediterranean citrus growing region, where the country’s citrus is mostly grown. Increased production in the Mediterranean region is expected to more than offset yield losses, which were upwards of 20 percent, in the Aegean region due to low temperature conditions in the spring of 2021.

The tangerine production estimate for MY 2020/21 remains unchanged at 1.6 MMT, though up year-to-year by 200,000 MT. This increase was primarily due to an increase in the number of bearing trees.

Figure 5. Turkey Tangerine Bearing and Non-bearing Trees and Yield per tree Comparison, MY 2019/20-21-22



Source: TurkSTAT, 2022.

Tangerine producers are struggling with rising input costs, such as fuel, electricity, fertilizer, and crop protectants. According to growers, tangerines are the most expensive among all fruits to produce with producer prices up 140 percent at the beginning of 2022 compared to last year.

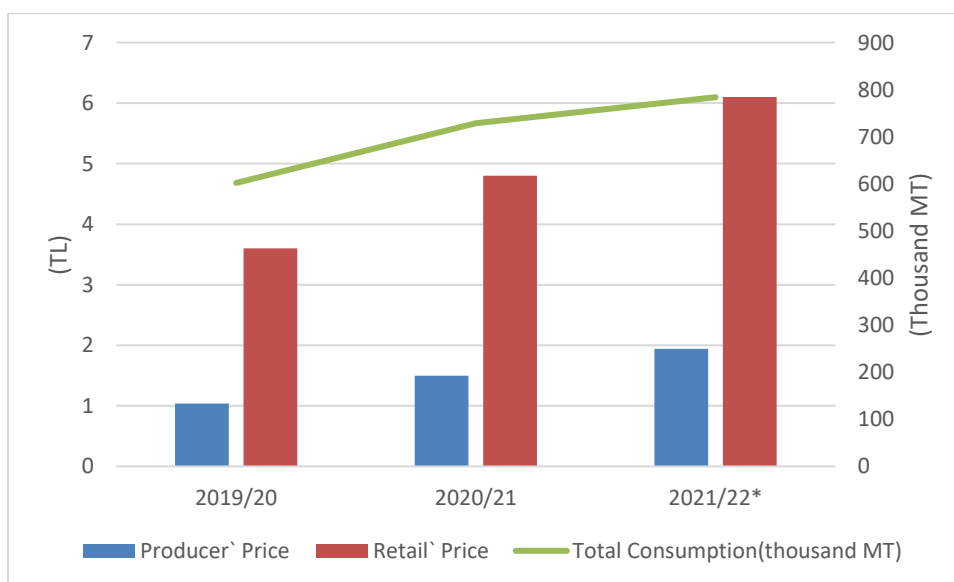
Farm gate prices have not kept pace with these rising input costs, causing some farmers to leave the unharvested fruit on the trees or throw it away. Even producers who are growing the *W.Murcott* variety, a popular export variety of tangerines, reported that higher input costs have eroded profits. In addition, some growers lament that rising production volumes have limited their ability to raise prices.

Consumption:

The mandarin consumption figure for MY 2021/22 is revised upward from the USDA official number to 844,000 MT. This increase is based on higher domestic production. The MY 2020/21 consumption estimate remains unchanged at 739,000 MT.

Retail prices for mandarins are about 300 percent higher than the farm gate price. This price difference is concerning for many farmers, especially in recent years as their profit margins have shrunk. The sizeable price difference between farm gate and retail is attributed to middlemen along the supply chain.

Figure 6. Turkish Tangerines Prices at Local Markets and Gate Price Comparison with Total Consumption, from MY 2019/20 to MY 2021/22



Source: TurkSTAT, 2022 (1 USD equals to 17.21 Turkish Lira as of June 14, 2022). * MY 2021/22 consists of October 2021- March 2022` prices and the estimation of total consumption).

Trade:

The tangerine export forecast for MY 2021/22 remains unchanged at 1.0 MMT. Year-over-year tangerine exports are up by a little more than 100,000 MT, or about 11 percent due to increased domestic production.

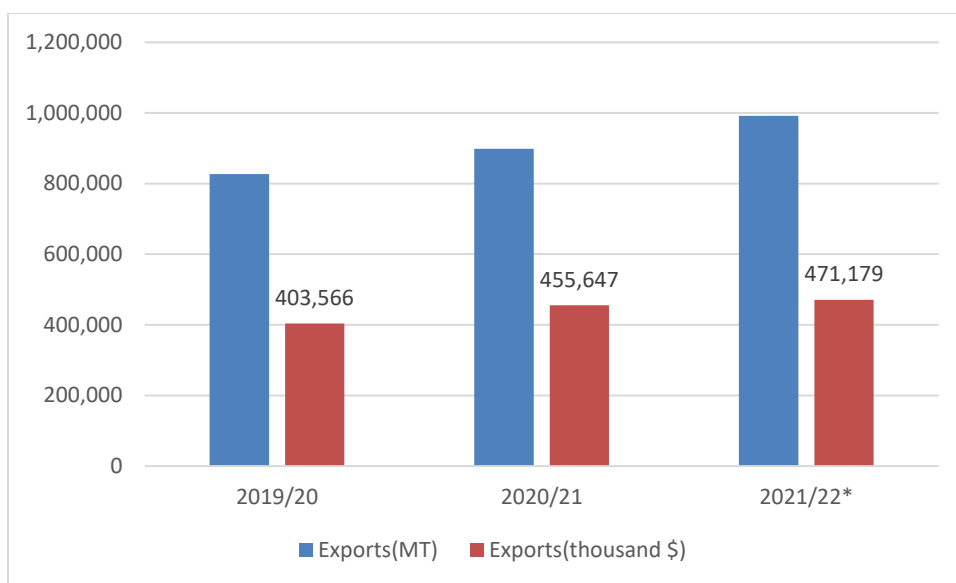
Russia, Ukraine, and Iraq are the biggest export markets for Turkish tangerines in MY 2021/22. Russia is the leading destination for Turkish tangerines, accounting for about half of total exports. Exports this

marketing year, which typically start in September, were delayed by a week due to adverse weather conditions. This later start led to delayed shipments and financial losses.

Like oranges, tangerine exports to EU countries require to obtain a conformity certificate. In addition, as of January 2022, Turkish tangerine exports to the UK are now subject to increased testing for pesticides on arrival. The rate of testing by shipment is now 50 percent.

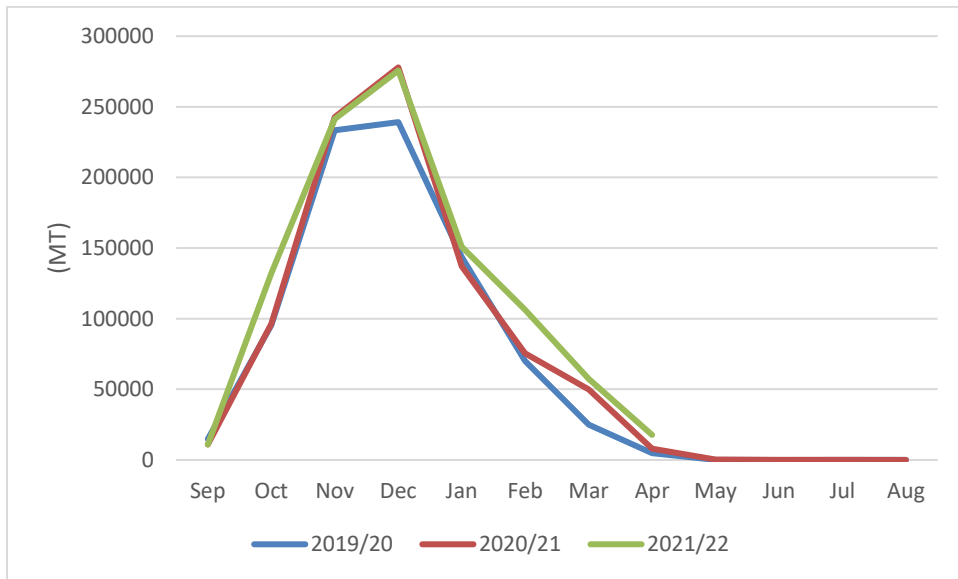
Among the different citrus fruits, tangerine exports are the biggest by volume. The *Satsuma* is the most popular variety of exported tangerines, accounting for approximately half of total export revenues for tangerines. In addition, a seedless variety of tangerines from Izmir province, on the west coast of Turkey, is reportedly becoming increasingly popular for export.

Figure 7. Turkey Tangerine Export Comparison in MT vs USD for MY 2019/20, MY 2020/21 and MY 2021/22.



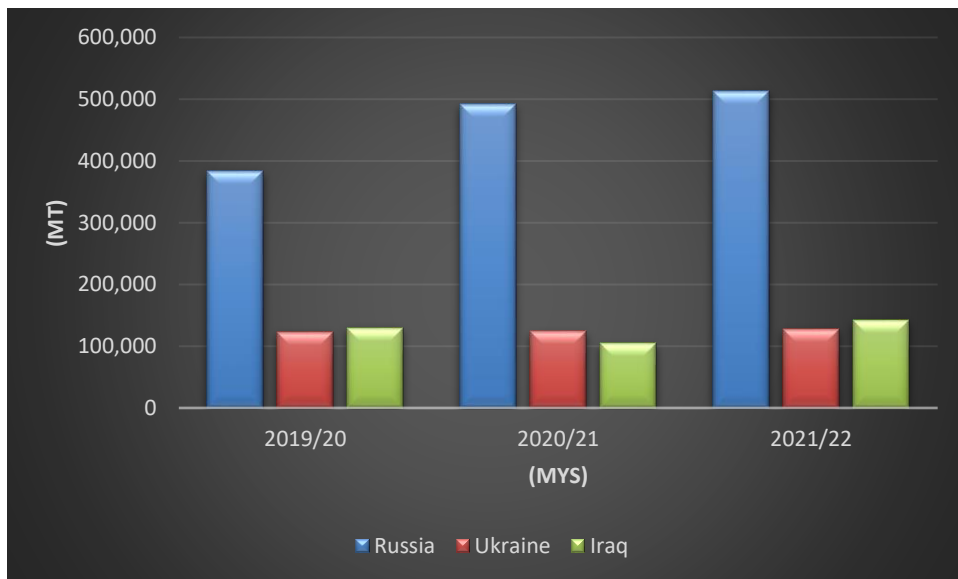
Source: Trade Data Monitor, LLC. (Note: MY 2021/22 data includes October-April only)

Figure 8. Turkey Tangerine Export Comparison in MT for MY 2019/20, MY 2020/21 and MY 2021/22.



Source: Trade Data Monitor, LLC. (Note: MY 2021/22 data includes October-April only)

Figure 9. Turkey Tangerine Export Comparison by the Main Markets for MY 2019/20, MY 2020/21 and MY 2021/22.



Source: Trade Data Monitor, LLC. (Note: MY 2021/22 data includes October-April only)

Production, Supply and Distribution Statistics:

Table 2: PSD Tangerines, Fresh

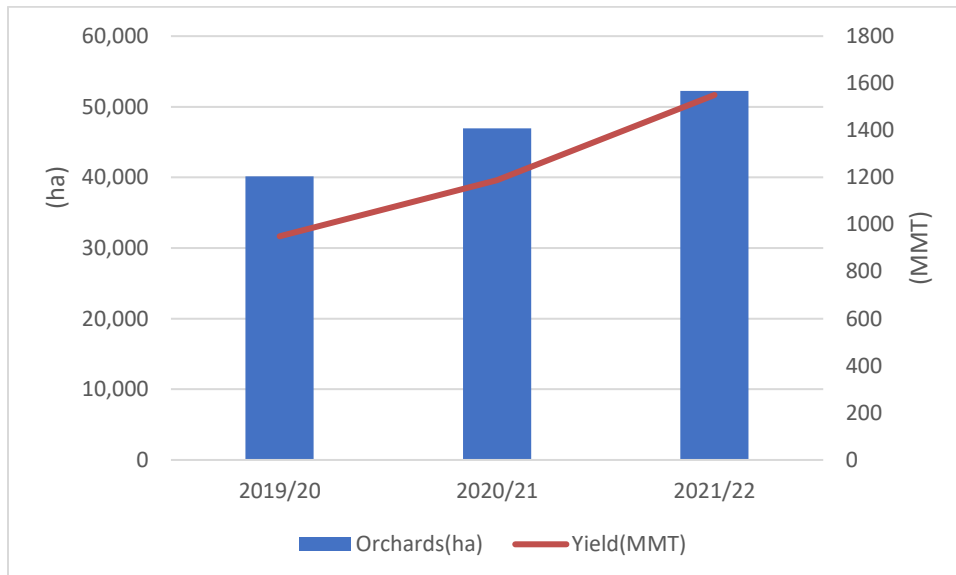
Tangerines/Mandarins, Fresh	2019/2020		2020/2021		2021/2022	
Market Year Begins	Sep 2019		Sep 2020		Sep 2021	
Turkey	USDA Official	New Post	USDA Official	New Post	USDA Official	New Post
Area Planted (HECTARES)	53553	53553	59832	59832	59900	60719
Area Harvested (HECTARES)	52000	52000	58000	58000	59000	60719
Bearing Trees (1000 TREES)	15183	15183	15926	15926	16000	16987
Non-Bearing Trees (1000 TREES)	4158	4158	5842	5842	5700	5571
Total No. Of Trees (1000 TREES)	19341	19341	21768	21768	21700	22558
Production (1000 MT)	1400	1400	1600	1600	1750	1810
Imports (1000 MT)	42	42	38	38	35	35
Total Supply (1000 MT)	1442	1442	1638	1638	1785	1845
Exports (1000 MT)	827	827	898	898	1000	1000
Fresh Dom. Consumption (1000 MT)	614	614	739	739	784	844
For Processing (1000 MT)	1	1	1	1	1	1
Total Distribution (1000 MT)	1442	1442	1638	1638	1785	1845
(HECTARES) ,(1000 TREES) ,(1000 MT)						

Lemons, Fresh

Production:

The MY 2021/22 lemon production forecast is revised downward from the official USDA estimate by 63,000 MT to 1.33 MMT. Post's original forecast was too bullish. Meantime, year-over-year production is expected to increase because of favorable weather conditions in late spring 2021 and an increase in the number of bearing trees. Growers are expanding the area of their lemon orchards in part because lemons are more profitable compared to other citrus fruits. Year-to-year production is up about 22 percent. Meantime, the MY 2020/21 lemon production estimate remains unchanged at 1.1 MMT.

Figure 10. Lemon Orchards Area and Yield (MT) Comparison, MY 2019/20-MY 2020/21-MY 2021/22



Source: TurkSTAT, 2022

Lemon growers are struggling with rising input costs, such as fuel, electricity, fertilizer, and crop protectants. Lemon growers also report challenges with disease, pests, rising labor costs, and limited cold storage capacity. Growers reportedly need additional cold storage capacity to properly store product for export.

Retail prices for lemons are currently five times higher than the farm gate price. Low farm gate prices have reportedly discouraged some growers from harvesting their lemons this marketing year's crop. According to lemon producers, 30 percent of the *Meyer* lemon variety was left on the tree because the farm gate price was too low. Growers blame the low selling prices on middlemen and the government's ban last year on lemon exports to prevent domestic shortfalls amid the pandemic.

Consumption:

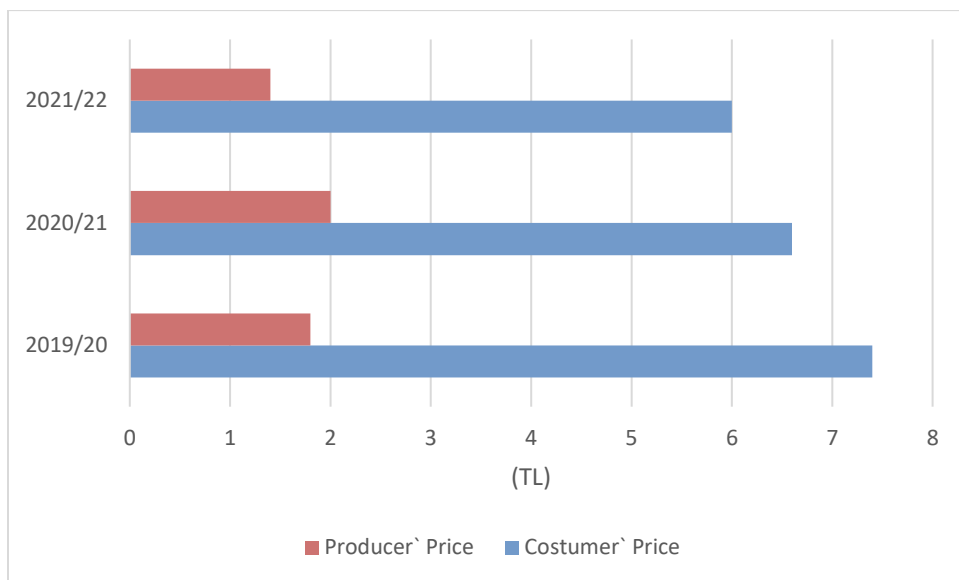
The MY 2021/22 lemon consumption forecast is adjusted downward to 510,000 MT, a decrease of 68,000 MT from the USDA official number. This revision is largely based on adjusted production volumes. Year-to-year consumption is up approximately 17 percent.

The MY 2020/21 consumption estimate remains unchanged at 433,000 MT. Year-over-year consumption dropped due to pandemic-related closings of restaurants and cafes, where a large percentage of lemons are consumed in beverages.

In early 2021, rising lemon prices grabbed news headlines across the country. In response to the higher prices, the government started selling lemons at lower prices at government-affiliated markets, while

commercial markets and supermarkets continued to sell at high prices. This response suggests that the government may again intervene in the market if lemon or other citrus prices are judged to be too high.

Figure 11. Producer and Customer prices comparison, MY 2019/20, MY 2020/21 and MY 2021/22*



Source: MinAF, 2022 (1 USD equals to 17.21 Turkish Lira as of June 14, 2022). * MY 2021/22 includes the average data from September 2021 to April 2022.

Trade:

Exports

The MY 2021/22 forecast for lemon exports is adjusted slightly upward to 780,000 MT. Year-to-year lemon exports are up 25 percent because of increased domestic production and strong export demand. Meantime, producers are growing new, earlier-maturing lemon varieties that extend the lemon export season.

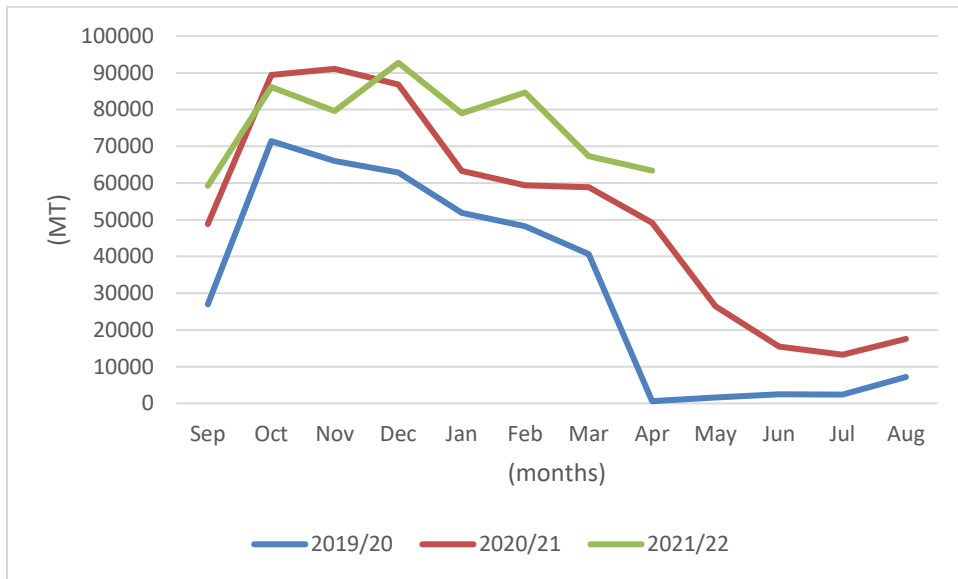
In 2020/21, Turkey exported nearly 620,000 MT of lemons, valued at \$296 million, which is 38 percent more on a volume basis than the previous year. Exports went mostly to Russia, Iraq, and Ukraine.

As of January 2022, Turkish lemon exports to the European Union and the UK are subject to increased testing for pesticides. The rate of testing by shipment has now been raised to 50 percent.

Imports

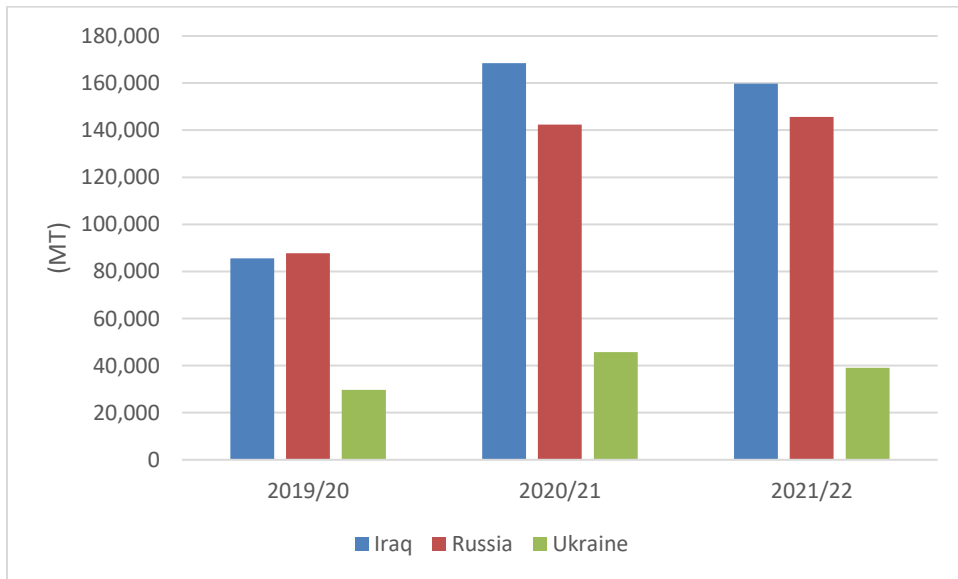
Turkey imports very small volumes of lemons, mostly from the Turkish Republic of Northern Cyprus and Brazil.

Figure 12. Turkey Lemon Export Comparison in MT for MY 2019/20- MY 2020/21- MY 2021/22.



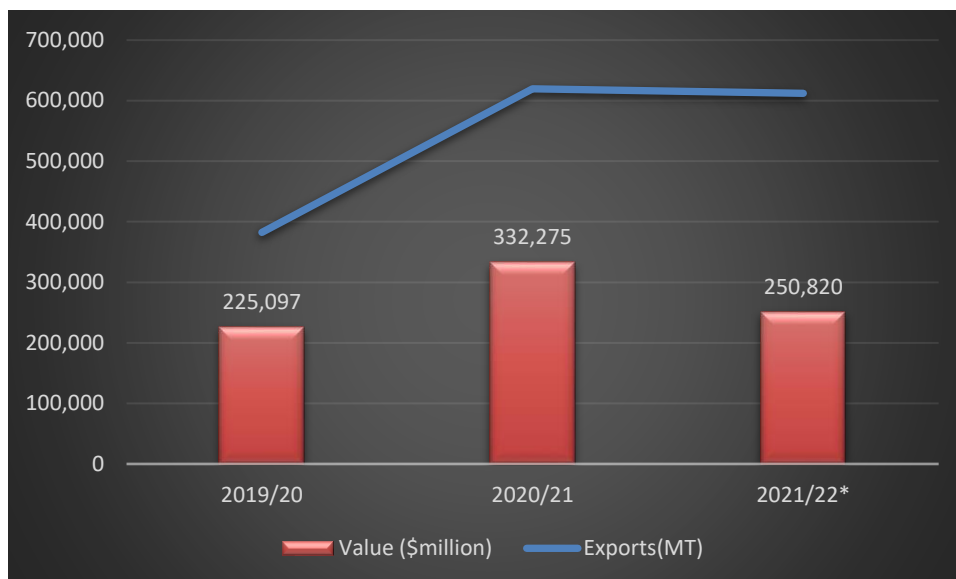
Source: Trade Data Monitor, LLC

Figure 13. Turkey Lemon Export Comparison by Top 3 Export Markets.



Source: Trade Data Monitor, LLC (Note: MY 2021/22 data includes September-April gap)

Figure 14. Turkey Lemon Export by years, MT vs USD.



Source: Trade Data Monitor, LLC (Note: MY 2021/22 data includes September-April gap)

Production, Supply and Distribution Statistics:

Table 3: PSD Lemons/Limes, Fresh

Lemons/Limes, Fresh	2019/2020		2020/2021		2021/2022	
	Sep 2019		Sep 2020		Sep 2021	
	USDA Official	New Post	USDA Official	New Post	USDA Official	New Post
Area Planted (HECTARES)	40154	40154	46935	46935	48000	52233
Area Harvested (HECTARES)	38000	38000	45000	45000	46000	52233
Bearing Trees (1000 TREES)	9798	9798	11139	11139	12000	13539
Non-Bearing Trees (1000 TREES)	3238	3238	4391	4391	4300	4112
Total No. Of Trees (1000 TREES)	13036	13036	15530	15530	16300	17651
Production (1000 MT)	950	950	1100	1100	1400	1337
Imports (1000 MT)	3	3	3	3	3	3
Total Supply (1000 MT)	953	953	1103	1103	1403	1340
Exports (1000 MT)	382	382	620	620	775	780

Fresh Dom. Consumption (1000 MT)	520	520	433	433	578	510
For Processing (1000 MT)	51	51	50	50	50	50
Total Distribution (1000 MT)	953	953	1103	1103	1403	1340
(HECTARES) ,(1000 TREES) ,(1000 MT)						

Grapefruit, Fresh

Production:

For MY 2021/22, the grapefruit production forecast is nearly unchanged at 249,000 MT. Production is up 5 percent year-to-year because of better yields resulting from favorable weather conditions in the Mediterranean growing region. Improved yields have allowed production to increase even though orchard acreage has declined. Grapefruit production in MY 2020/21 is estimated unchanged at 238,000 MT.

Like other citrus producers, grapefruit growers are struggling with higher input costs, such as electricity, fertilizer, and fuel. With grapefruit requiring more water than other citrus fruits, grapefruit growers are also complaining about higher irrigation costs. At the same time, farm gate prices are significantly lower than retail prices. Furthermore, low farm gate prices are insufficient to cover rising input costs.

Consumption:

The grapefruit consumption forecast for MY 2021/22 is revised upward from the USDA official estimate by a little more than 10,000 MT to 109,000 MT in response to rising domestic production. Meantime, year-over-year production is up by 40 percent, or slightly more than 30,000 MT. Most grapefruit are consumed as fresh-squeezed juice.

The grapefruit consumption number is expected to include some losses because it is difficult to account for volumes left on the tree or ground. This lost, or wasted fruit, is primarily due to challenges grapefruit growers are facing in making a profit. Farm gate prices are below production costs.

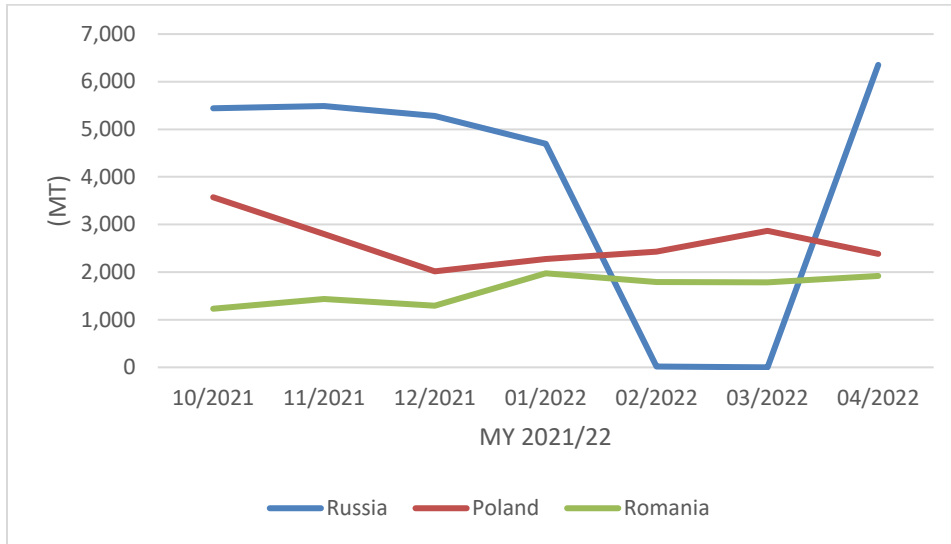
Trade:

For MY 2021/22, the grapefruit export forecast is revised down by a little more than 10,000 MT from the USDA official estimate to 140,000 MT. Part of the reason for forecasted decline are pesticide residue challenges.

Exports to Russia during the first half of the marketing year (Oct-Mar) dropped to zero for both February and March after Russia stopped shipments due to pesticide residue concerns. In addition, as of January 2022, Turkish grapefruit exports to the European Union and the UK are subject to increased testing for pesticides. The rate of testing by shipment is now 50 percent.

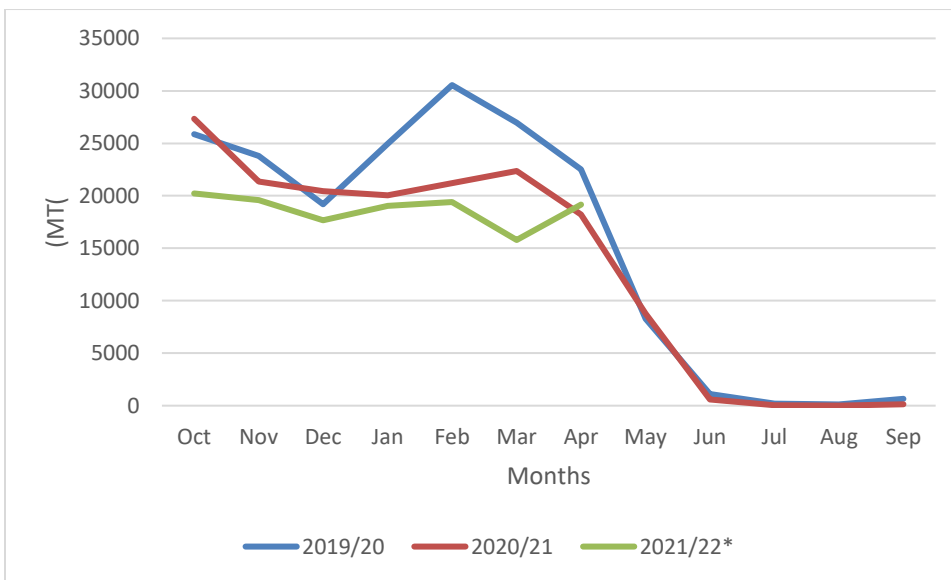
In MY 2020/21, grapefruit exports reached nearly 161,000 MT, valued at \$89 million. Leading export destinations were Russia, Poland, and Ukraine. Export volumes declined from the previous year because of increased residue inspections on product destined to Europe. The most exported grapefruit variety is *Star Ruby*.

Figure 15. Turkey Grapefruit Export Comparison by Top Export Markets, in MT for MY 2021/22.



Source: Trade Data Monitor, LLC (Note: MY 2021/22 data includes September-April gap)

Figure 16. Turkey’s Grapefruit Exports, MY 2019/20- MY 2020/21- MY 2021/22, Comparison by Month



Source: Trade Data Monitor, LLC (Note: MY 2021/22 data includes September-April gap)

Production, Supply and Distribution Statistics:

Table 4: PSD Grapefruit, Fresh

Grapefruit, Fresh	2019/2020		2020/2021		2021/2022	
	Oct 2019		Oct 2020		Oct 2021	
Market Year Begins	USDA Official	New Post	USDA Official	New Post	USDA Official	New Post
Turkey						
Area Planted (HECTARES)	5222	5222	5051	5051	5200	5039
Area Harvested (HECTARES)	4900	4900	4800	4800	4900	4900
Bearing Trees (1000 TREES)	1229	1229	1184	1184	1200	1189
Non-Bearing Trees (1000 TREES)	42	42	44	44	0	27
Total No. Of Trees (1000 TREES)	1271	1271	1228	1228	1200	1216
Production (1000 MT)	249	249	238	238	250	249
Imports (1000 MT)	1	1	1	1	1	1
Total Supply (1000 MT)	250	250	239	239	251	250
Exports (1000 MT)	184	184	161	161	152	140
Fresh Dom. Consumption (1000 MT)	65	65	77	77	98	109
For Processing (1000 MT)	1	1	1	1	1	1
Total Distribution (1000 MT)	250	250	239	239	251	250
(HECTARES) ,(1000 TREES) ,(1000 MT)						

Orange Juice

Production:

Orange juice production for MY 2021/22 is left unchanged at 10,000 metric tons, though up year-on-year by 500 MT. This annual increase parallels both an increase in orange production and rising consumer demand for orange juice.

Turkey's fruit processing and juice manufacturing industries are growing. In MY 2020/21, Turkey produced 16 MMT of fruit, of which 1.3 MMT was used to produce juice. The most widely produced juices are apple, pomegranate, and orange. Orange juice accounts for just 7 percent of total juice production.

Consumption:

The MY 2021/22 orange juice consumption number is revised upward from the USDA official forecast to 8,413 MT. Year-over-year consumption is up in parallel with increased domestic orange production.

The covid pandemic spurred increased domestic demand for orange juice since health-conscious consumers wanted to increase their intake of vitamin C. However, annual consumption of orange and other fruit juices in Turkey, estimated at 8-9 liters per person, is still considered low when compared with other European countries.

Trade:

Exports

The orange juice export forecast for MY 2021/22 is reduced to 2,800 MT due to weaker than expected export demand. In MY 2020/21, Turkey exported almost 3,200 MT of orange juice, valued at \$4 million. Leading export destinations were Italy, the Netherlands, and China. For comparison, the most exported fruit juice from Turkey is apple juice, with exports totaling a bit more than 155,000 MT, valued at \$200 million, in MY 2020/21.

Imports

Orange juice imports for MY 2021/22 are unchanged from the earlier forecast and are the same as last year at 1,213 MT. Turkey mainly imports frozen orange juice, most of which comes from Northern Cyprus and Brazil. According to the domestic juice sector, orange juice imports from the Netherlands have been on the rise during the past couple years due to a growing consumer demand for higher-quality orange juice.

Production, Supply and Distribution Statistics:

Table 5: PSD Orange Juice

Orange Juice	2019/2020		2020/2021		2021/2022	
	Oct 2019		Oct 2020		Oct 2021	
Market Year Begins						
Turkey	USDA Official	New Post	USDA Official	New Post	USDA Official	New Post
Deliv. To Processors (MT)	110000	0	105000	105000	110000	110000
Beginning Stocks (MT)	150	150	150	150	150	150
Production (MT)	9500	0	9500	9500	10000	10000
Imports (MT)	2213	0	1213	1213	1213	1213
Total Supply (MT)	11863	150	10863	10863	11363	11363

Exports (MT)	3730	0	3159	3159	3250	2800
Domestic Consumption (MT)	7983	0	7554	7554	7963	8413
Ending Stocks (MT)	150	150	150	150	150	150
Total Distribution (MT)	11863	150	10863	10863	11363	11363
(MT)						

Attachments:

No Attachments