

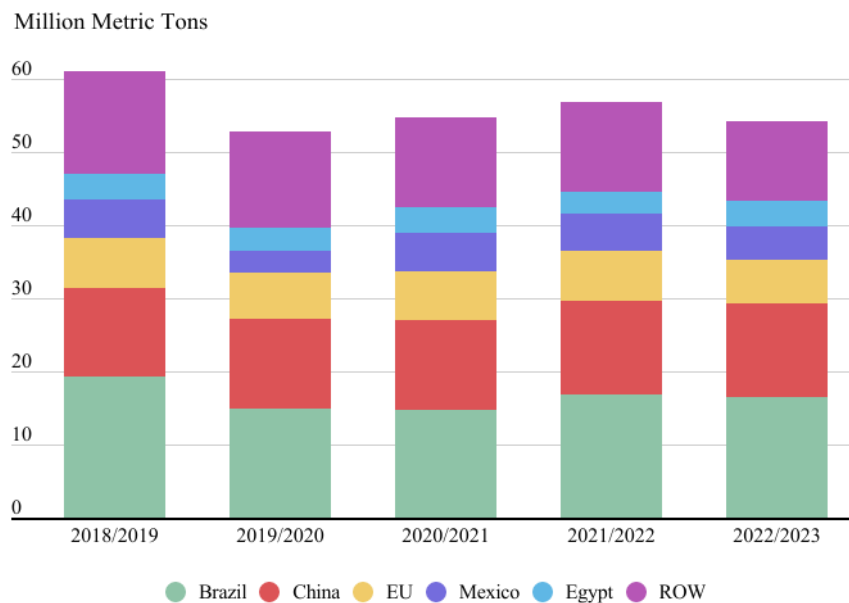


GLOBAL MARKETS FOR TEXAS ORGANIC CITRUS¹
CNAS Report 2023-04

World Citrus Production

During the 2023 marketing year for citrus, the world produced 54.3 million metric tons (MMT). Throughout this report, when citrus is discussed, it refers to fresh oranges and grapefruits. The lion’s share of citrus grown across the globe was oranges, totaling 47.5 MMT in 2023. Grapefruit grown around the world accounted for the other 6.8 MMT. Leading the world in citrus production is Brazil since the 2018/2019 marketing year. Brazil grew 30 percent of citrus grown in 2023, or 16.5 MMT of citrus which was entirely oranges. China is the second largest grower with 12.8 MMT of citrus in 2023, leading the world in grapefruit production and the second largest country for orange production. The EU, Mexico, and Egypt round out the top five largest producers. These five countries accounted for 77-81 percent of citrus globally since 2018.

World Production of Citrus, 2018-2023



Source: PS&D, USDA/FAS

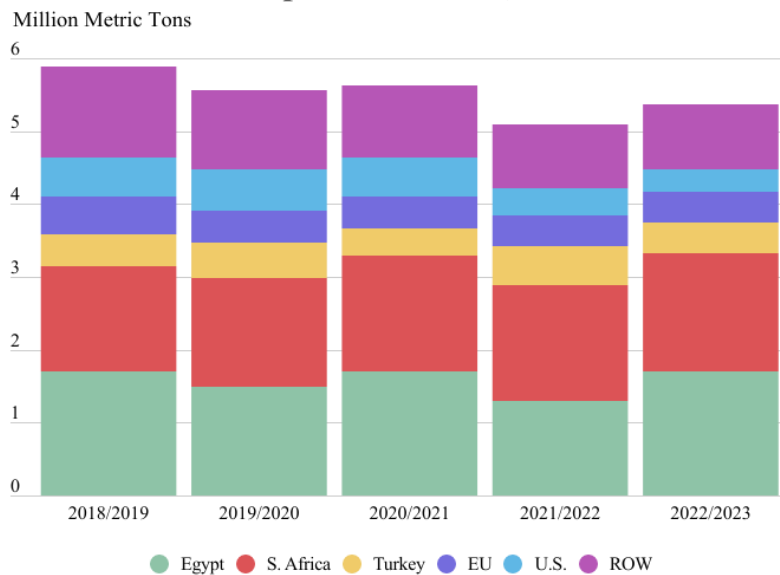
¹ *Global Markets for Texas Organic Citrus* is a report of the project Organic Export Market Analysis for Selected Texas Commodities, funded by the Texas Department of Agriculture and Texas International Produce Association. For more information, please contact the Center for North American Studies, Department of Agricultural Economics, Texas A&M AgriLife Extension Service, College Station, TX, 77843-2124. 979-845-3070.

Global Citrus Exports

During the 2023 marketing year, 5.34 MMT of citrus was exported from all countries with the top five being the source of 4.47 MMT, or 83 percent of the world’s citrus exports. Leading these five countries was Egypt which exported 1.7 MMT of oranges with no grapefruit exports. South Africa ranked as the second largest export market for citrus. South Africa ranked second for orange exports with 1.38 MMT in 2023 and leading the world in grapefruit exports with 245 thousand metric tons (TMT). These two countries have been fighting to lead the world in citrus exports since 2017 with both exporting more than 1.44 MMT per year. Turkey, the EU, and the United States follow with their total exports reaching 1.14 MMT in the 2022/2023 marketing year.

The bulk of these exports are oranges which have been anywhere from 4.4-5.2 MMT since the 2017/2018 marketing year. Grapefruit exports on the other hand accounted for between 638-890 TMT over this time.

World Exports of Citrus, 2018-2023

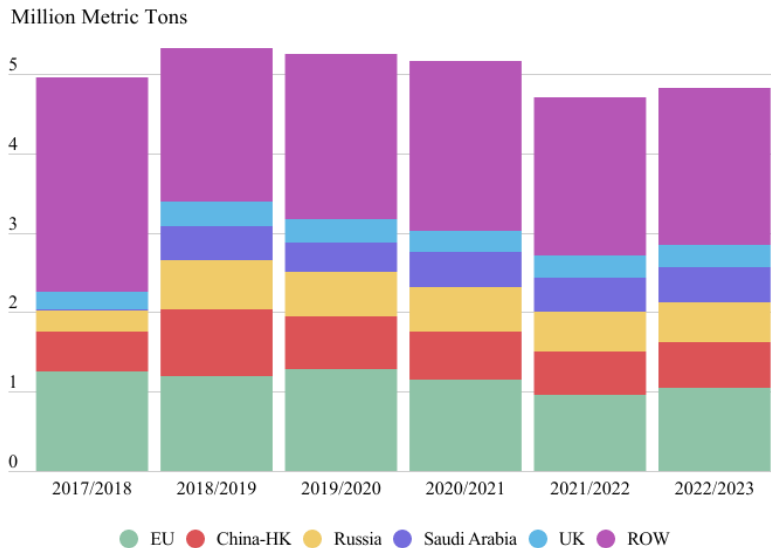


Source: PS&D, USDA/FAS

Global Citrus Importers

The EU as a bloc led the world across all citrus imports and imported nearly double the volume as the second importing country for both oranges and grapefruits. In the 2022-2023 marketing year, the EU imported 215 TMT of grapefruits and 835 TMT of oranges. This surpasses the 567 TMT of citrus imported by China-Hong Kong (HK) as well as the 50 TMT of grapefruits and 455 TMT of orange imported by Russia. Saudia Arabia ranks as the fourth largest country importing citrus, totaling 435 TMT of orange imports and no grapefruit imports in the 2022/2023 marketing year, and has imported a similar volume each year since 2018.

World Imports of Citrus, 2018-2023



Source: PS&D, USDA/FAS

U.S. Citrus Exports

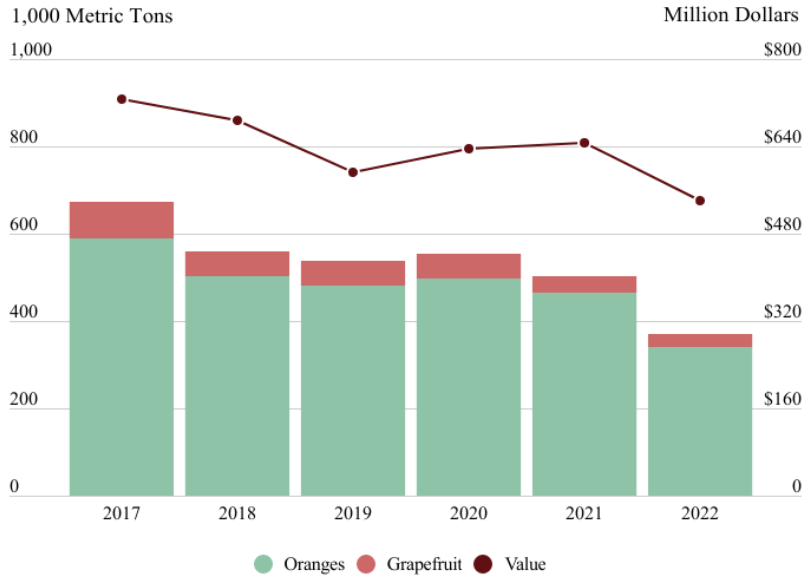
During 2022, the United States exported 341 TMT of oranges and 29 TMT of grapefruits totaling 370 TMT of citrus valued at \$542 million. Citrus exports have fallen overall since 2017 from 673 TMT worth \$725 million. This decline is due to multiple factors. One source of this decline comes from maximum residue limit (MRL) changes for products imported by EU countries as well as multiple large Asian markets seeing some demand for citrus decrease and more U.S. grown citrus being consumed domestically.

A third of grapefruit exports from the United States in 2022 were destined for Canada which imported 10 TMT worth \$9.8 million. Japan follows closely having decreased imports from 21.5 TMT in 2017 to 7.2 TMT in 2022. Similar occurred in South Korea during 2021. As mentioned, the MRL policy change impacted citrus exports to the EU harshly. Exports to France fell from 10.5 TMT in 2017 to 23 metric tons (MT), similar occurred in the Netherlands and Germany to a lesser degree.

Orange exports have also been on the decline over recent years. During 2017, exports of oranges from the United States were 588 TMT but fell to 341.4 TMT in 2022. This decline came from not just one market. South Korea has been the largest market for U.S. oranges for quite some time and has decreased 105 TMT since 2017 reaching an export volume of 82.2 TMT. Canada and Mexico both rank in the top five largest markets importing oranges from the United States with 75.5 TMT and 26.9 TMT, respectively. While Canadian imports have fallen 40 TMT in this time Mexican imports have increased from 16.7 TMT. The markets to round out the top five for U.S. oranges are China-Hong Kong (HK) and Japan. When looking at China-HK, Hong Kong

alone imported 38.2 TMT of the 58.9 TMT imported by the two, this is down from 133.3 TMT in 2017.

U.S. Exports of Citrus, 2017-2022



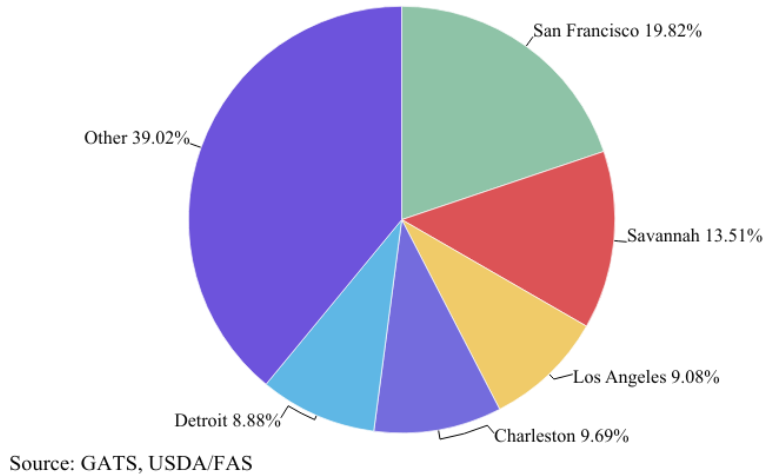
Source: GATS, USDA/FAS

Of the 29 TMT of grapefruit exported from the United States, 61 percent moved through the five leading port districts. Two California port districts ranked in the top five for grapefruit exports: San Francisco which led the country in volume of grapefruit exported with 5.7 TMT and Los Angeles where 2.6 TMT of grapefruits were exported. The primary destination for both districts were Japan and South Korea, but also included other markets in Asia and South America. The port districts of Savannah and Charleston exported 3.9 and 2.8 TMT of grapefruit respectively, which was mostly sent to the EU or Japan. Detroit, the fifth largest port district in terms of grapefruit exports, sent all 2.5 TMT of their exports to Canada.

The two leading port districts for orange exports from the United States were Los Angeles and San Francisco with 151 and 81.3 TMT, respectively. South Korea received the largest volume of oranges from both port districts. During 2022, the other major countries receiving oranges from these ports included China-HK, Japan, and Australia. The two port districts following are Detroit and Seattle where 28.7 and 19.8 TMT of oranges left the United States, almost entirely for Canada.

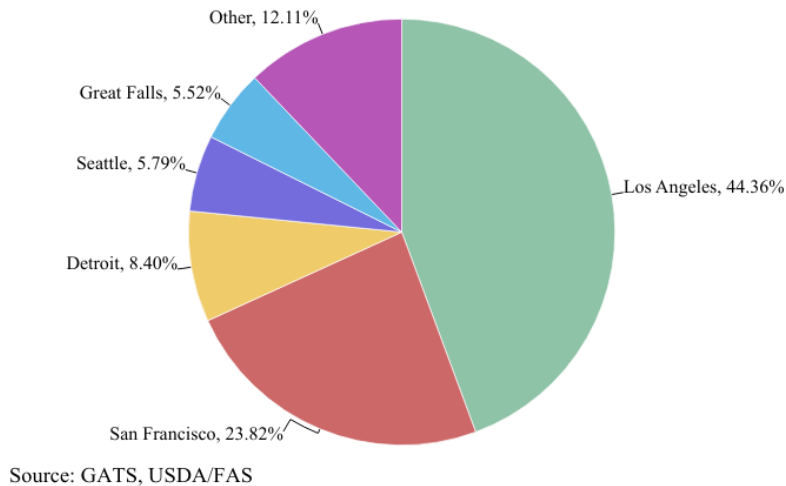
U.S. Exports of Grapefruit by Port District, 2022

Total: 28,890 Metric Tons



U.S. Exports of Oranges by Port District, 2022

Total: 314,415 Metric Tons



U.S. production of citrus during 2022 was 1.48 MMT, the country was led by California both for grapefruit and oranges. California produced 91 percent of all oranges grown in the United States for 2022 as well as 44 percent of grapefruits. Florida grew 106 TMT of oranges and 70.8 TMT of grapefruit. Texas ranked third for U.S. citrus production having grown 34.4 TMT after having production decrease each year since 2019. Poor crop yields due to weather related issues have brought down production for the entire nation since 2020.

When looking at organic production of citrus across the United States, the only value that is reported is for California which totaled 44.5 TMT of organic oranges in 2022 and 16.1 TMT of organic grapefruit. Production values for organic citrus from Arizona, Texas, Louisiana, and Florida are all withheld to prevent giving away specific production values for individual firms.

Citrus Production by State, TMT, 2019-2022

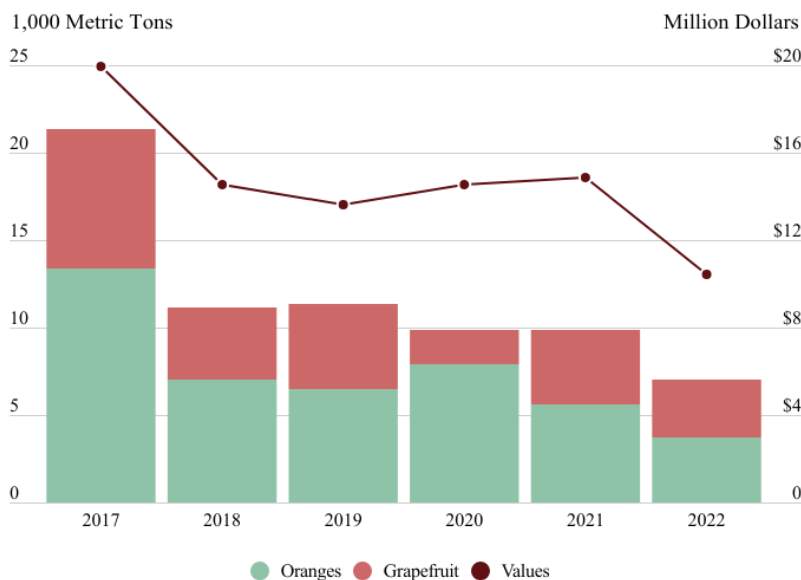
Oranges				
	2019	2020	2021	2022
California	1,393.8	1,546.3	1,317.6	1,194.2
Florida	111.6	132.5	133.4	106.2
Texas	40.8	38.1	30.9	4.5
Orange Total	1,546.3	1,716.9	1,481.9	1,304.9
Organic - CA	44.3		40.4	
Grapefruit				
	2019	2020	2021	2022
California	94.4	134.3	130.7	79.9
Florida	73.5	82.6	76.2	70.8
Texas	87.1	74.4	52.6	29.9
Grapefruit Total	255.0	291.3	259.5	180.6
Organic - CA	(D)		14.6	

Source: QuickStats, USDA/NASS

U.S. Organic Citrus Exports

During 2022, 7 TMT of organic citrus products were exported from the United States worth \$10.4 million. Organic grapefruit made up 3.3 TMT of this with the other 3.7 TMT being organic oranges. The largest market importing these organic citrus products is Canada which imported 3.9 TMT of organic citrus from the United States, 3.3 TMT of which were organic oranges. The second largest market in 2022 is Mexico which has grown their imports of organic grapefruits from 387 MT in 2020 to 1.57 TMT in 2022. Together, Canada and Mexico accounted for 83 percent of organic citrus exports from the United States in 2022. Organic citrus exports have decreased each year since 2017 where exports were 21.7 TMT, worth \$19.9 million. Much of this decrease has come from the South Korean and Japanese markets where exports have fallen from 6.3 and 2.9 TMT respectively at their highest to 1 TMT together in 2022. Asian market imports have fallen partially due to increasing exchange rate driving up relative cost of citrus products in countries like China, South Korea, and Japan.

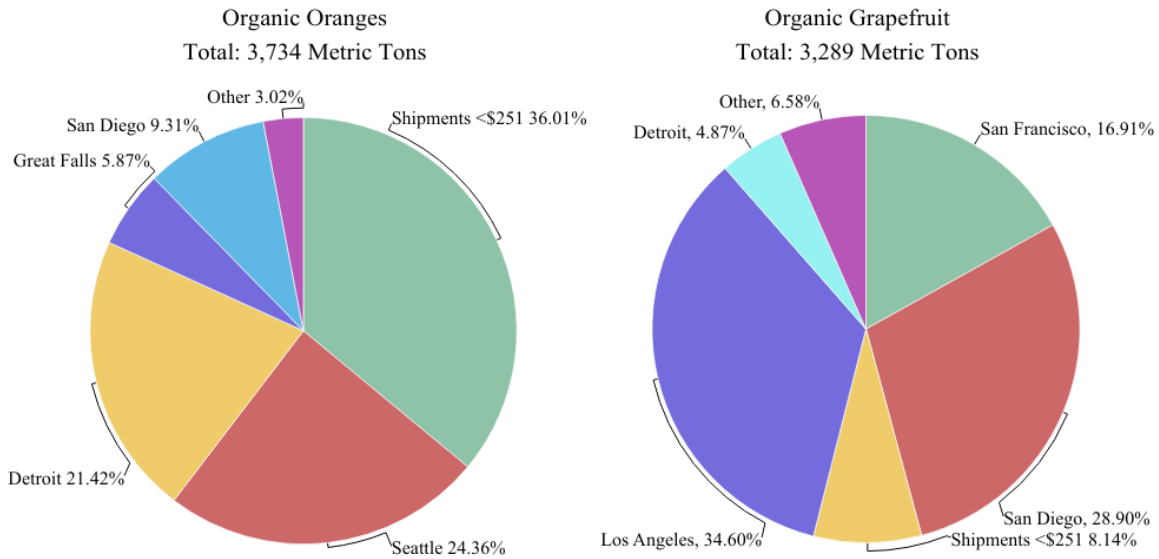
U.S. Exports of Organic Citrus, 2017-2022



Over 82 percent of the 3.3 TMT of organic grapefruits exported in 2022 passed through four port districts in 2022. The San Diego port district led with 1.4 TMT which went solely to Mexico. Two other California port districts ranked in the top five for volume of organic grapefruit exported in 2022, Los Angeles and San Francisco port districts exports went to various countries, but South Korea was the largest for both. Detroit ranks as the fourth largest port district exporting 244 MT of organic grapefruit to Canada. Similarly, all 271 MT of shipments with a value below \$251, which are combined rather than reported at the district level, were exported to Canada through various port districts.

Of the five leading port districts for organic orange exports, four had only Canada as a destination in 2022. The Seattle, Detroit, and Great Falls port districts exported only to Canada as well as shipments under \$251 which would be the leader if it were its own port district. These four districts together exported 3.3 TMT of organic oranges worth \$6.1 million to Canada. The fourth largest port district in terms of volume in 2022 was San Diego. All 347 MT of organic oranges through the San Diego district went to Mexico.

U.S. Exports of Organic Citrus by Port District, 2022



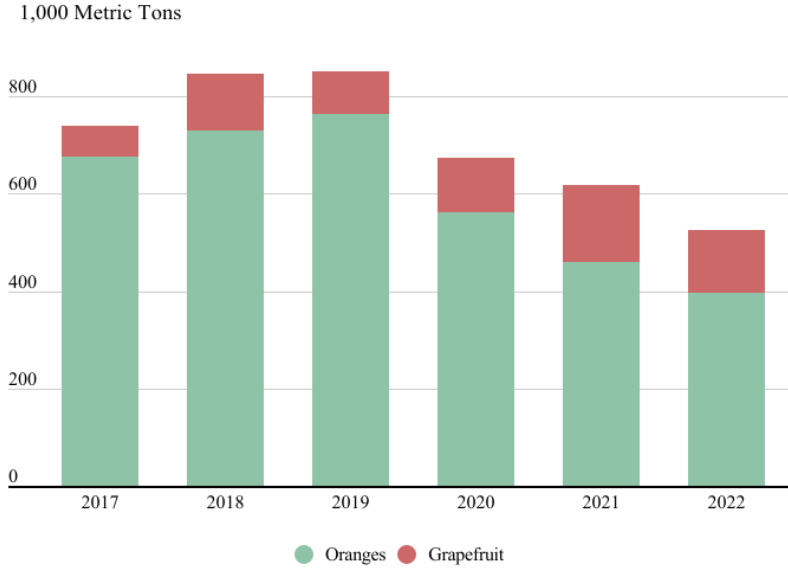
Source: GATS, USDA/FAS

Chinese-HK Market for Texas Organic Citrus

The Chinese market is the second largest in the world behind the EU. If the EU were to be measured as individual countries rather than measuring as a bloc, China is the world's largest market. During 2022, over 316 TMT of citrus was imported by China not including Hong Kong, when included brings the total for the area to 525 TMT. Between 74-91 percent of citrus imports by China-HK have been oranges since 2017. The share of grapefruit has been larger in recent years as orange imports have shrunk from 763 TMT to 395 TMT since the peak in 2019 with grapefruit imports growing from 89 to 130 TMT at the same time. Most of these citrus imports, both oranges and grapefruit, come from South Africa, 181 TMT of China's citrus total and an additional 81 TMT of Hong Kong's citrus imports. Following is Egypt, Australia, and then the United States closely behind.

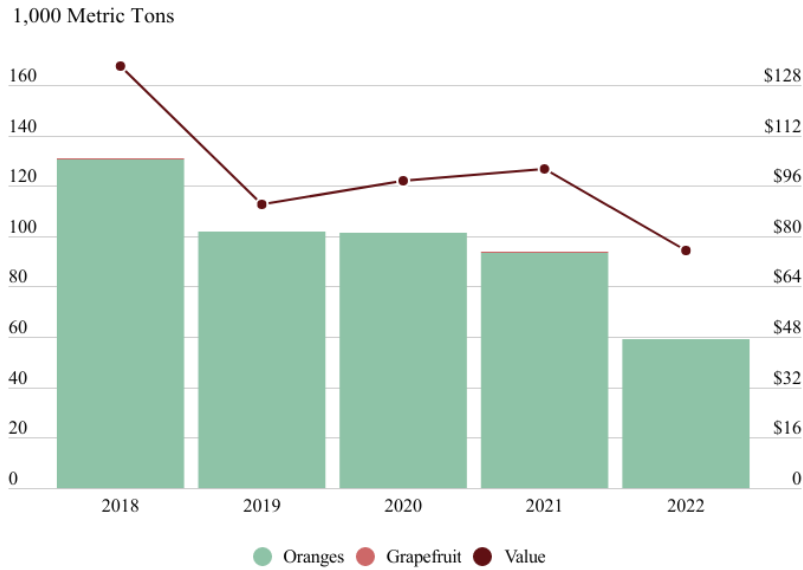
The United States exported 58.9 TMT of citrus to China-HK in 2022 worth \$75.4 million, entirely oranges. The U.S. has exported less than one hundred metric tons of grapefruit to China-HK each year since 2020. Citrus exports from the United States to China-HK have fallen every year since 2018 and have decreased by 71.8 TMT since 2018.

China-HK Citrus Imports, 2018-2022



Source: ComTrade, Department of Economic and Social Affairs/United Nations

U.S. Exports of Citrus to China-HK, 2018-2022



Source: GATS, USDA/FAS

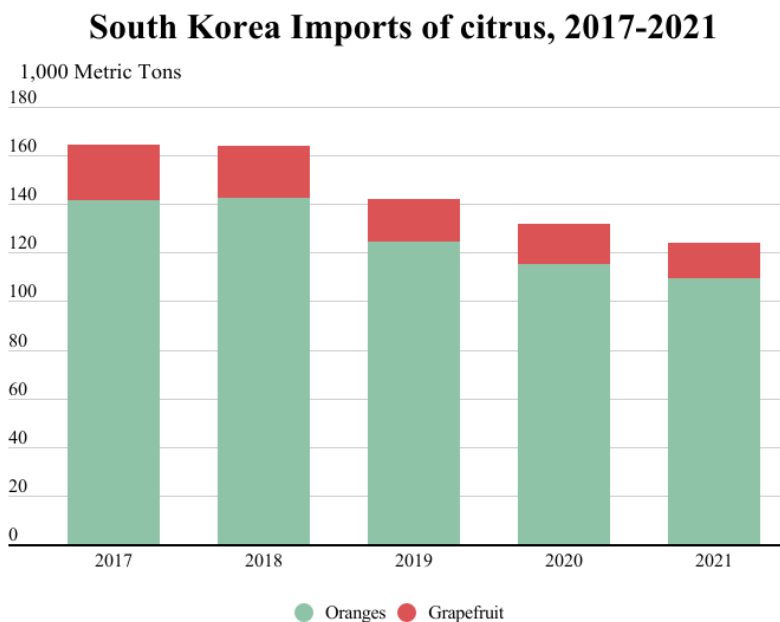
China-HK has opportunities for growth because of the sheer volume of citrus imports paired with a history of imports that have been on decline in part due to lower production in the United States limiting exports, but also because of relatively higher costs from the dollar being stronger in recent years increasing relative prices in the country. China-HK also has a history of importing organic crops from the United States. The United States exported over 7 TMT of organics to

China-HK in 2020, 802 MT were organic oranges. There is also the added benefit of higher disposable incomes in Hong Kong which is needed for higher value organic products.

China has a 100 percent tariff rate on grapefruit imports as well as a 56 percent rate on oranges. This is in addition to requiring a phytosanitary certificate (PC) on any citrus product entering the country from the United States and only allowing citrus grown in specific parts of the country, Texas and select counties of California and Florida. Looking at competition for the United States in the Chinese market there is multiple countries who are actively exporting products to the market. South Africa, as mentioned previously, has by far the largest share of the Chinese citrus market with 262 TMT of orange and grapefruit exports in 2022. There is also Egypt which exported 75.8 TMT in 2022, Australia which exported 56.8 TMT, and Egypt that exported 52.7 TMT which the United States will have to compete with to grow exports.

South Korean Market for Organic Texas Citrus

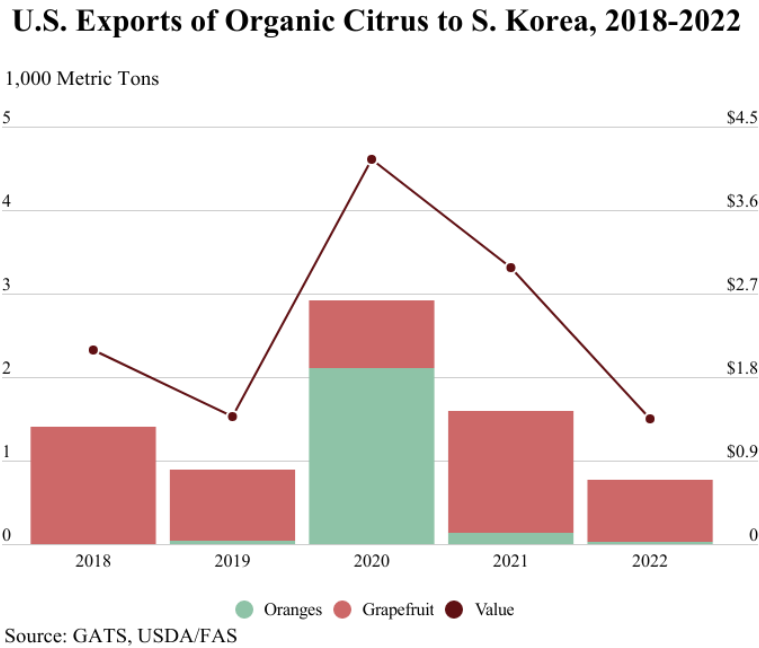
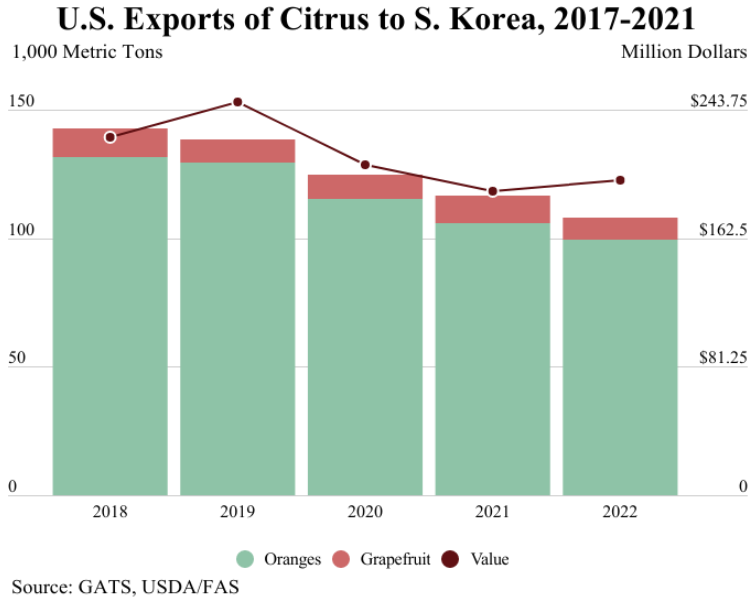
Imports of citrus products by South Korea totaled 124 TMT in 2021, with 109 TMT of this being oranges and grapefruit contributing the remaining 14.5 TMT of citrus imports. The United States was the source of 91 percent of orange imports in 2021 and 58 percent of grapefruit imports. South Korean citrus imports in 2021 are the lowest since 2017 and imports have been as high as 164 TMT. Competition being faced in the South Korean market comes primarily from South African grapefruit exports which totaled 43 TMT in 2021, 29.7 percent.



Source: ComTrade, Department of Economic and Social Affairs/United Nations

The United States exported 108 TMT of citrus to South Korea in 2022 worth \$200 million, which can be broken into 99.6 TMT of oranges and 8.38 TMT of grapefruit. Exports of citrus to South Korea has fallen each year since 2018, when exports were 143 TMT valued at \$226 million.

Despite a large volume of U.S. citrus exports destined for South Korea, only a small portion of that volume is organic, only 776 metric tons (MT) in 2022. Organic citrus exports from the United States highest volume since 2018 was 2.92 TMT worth \$4.15 million and organic oranges made up 2.11 TMT of that volume.



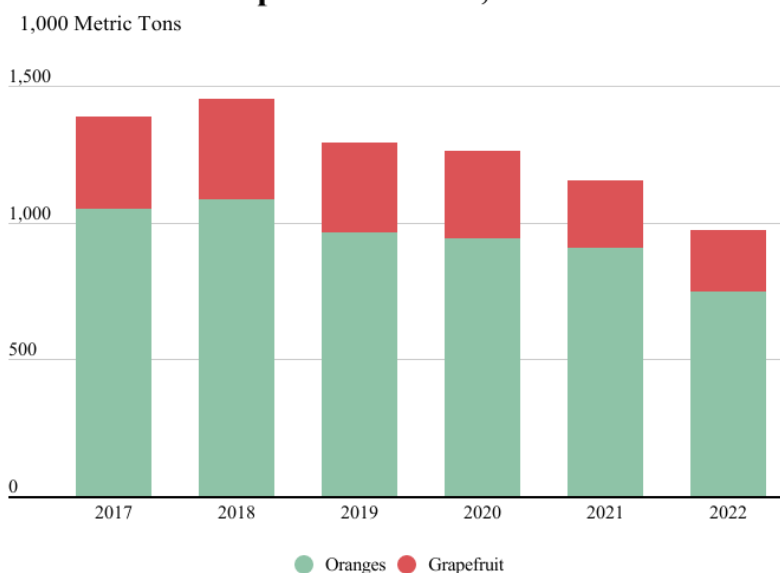
South Korea is the third largest market for U.S. grapefruit exports and the largest market for orange exports, making them the largest overall market for U.S. citrus exports. Despite this, they are the third market for organic citrus, behind Canada and Mexico, with only 776 MT of imports. During 2018, South Korea imported 18 TMT of organic products while only 6.6 TMT were imported in 2022. The South Korean markets wealth and disposable income could make it an ideal target for expanding U.S. citrus exports, especially when paired with a history of importing organic products and the volume of citrus already imported.

South Korea has no tariffs on grapefruit exports as well as oranges exported to the country between February and September. Exports between September and February to South Korea will incur a 50 percent tariff rate, despite being a free trade partner. South Korea also has in place a PC requirement on any citrus entering the country and grapefruit exported to South Korea is prohibited from Texas and Hawaii if it has not received an import permit (IP). Little competition for U.S. citrus exists in the South Korean market.

The European Market for Organic Citrus

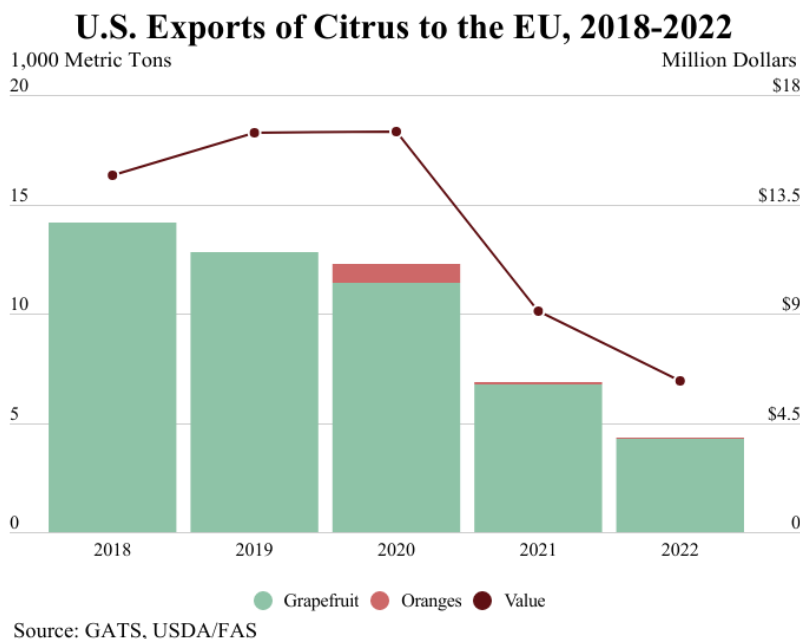
The EU imported 972 TMT of citrus in 2022, orange imports totaled 750 TMT and 222 TMT were grapefruits. Imports of both oranges and grapefruits have fallen each year since 2018, when citrus imports totaled 1.42 MMT. This can be partially attributed to better crops amongst EU countries bringing down imports from countries outside of the EU bloc. Leading those countries exporting citrus to the EU is South Africa which totaled 459 TMT in 2022, 383 TMT of which were oranges. Egypt, China, Turkey, and Morocco round out the top five markets exporting citrus to the EU, together these four exported 389 TMT of citrus to the EU.

EU Imports of Citrus, 2017-2022



Source: ComTrade, Department of Economic and Social Affairs/United Nations

Exports of citrus from the United States to the EU have fallen quite a bit in recent years due to maximum residue limits (MRL) that have been placed on U.S. citrus. Exports have fallen from 14 TMT in 2018 to 4.9 TMT in 2022 and decreased \$8.46 million across this time to \$6.21 million. Exports of grapefruits have accounted for 93-100 percent of citrus exported from the United States to the EU. Organic citrus has not been exported from the United States to the EU since 2020, when 9.1 MT of oranges were exported to the EU.



The European Union is the largest market for citrus imports across the globe, without including intra-EU trade. Despite that, U.S. citrus exports to the EU have been low for quite some time with organic exports being incredibly small. In 2023, 806 MT of organic products were exported from the United States to the EU. Multiple challenges exist to grow U.S. citrus exports to the EU. European tariff rates on U.S. citrus are low at 2.4 percent for grapefruit and 3.2 percent for oranges. The EU also has a PC requirement for all citrus entering the country as well as detailed treatment requirements. To learn more about PC, IP, or treatment requirements for the EU or any of the other countries mentioned contact information for the Texas Animal and Plant Health Inspection Service (APHIS) is found at:

https://www.aphis.usda.gov/aphis/ourfocus/planthealth/sa_export/sa_ecs/texas/. An IP is obtained by the foreign importer. A PC may be obtained by contacting the USDA APHIS. Further, it was mentioned that MRL requirements on exports to the EU are part of the reason that trade has suffered in recent years.

The size of the EU market paired with an income that allows them to buy higher value organic products makes them a market that needs to be examined when finding markets to grow exports. Tapping into even a small share of the EU market could be helpful for citrus producers in the United States and having organic citrus exports grow could open the door for many other organic products.

Conclusion

The United States ranks fifth in the world for exports of citrus, fifth for oranges and sixth for grapefruit. Exports for the two products during 2022 totaled 370 TMT worth \$541 million, of those exports 216 TMT were destined for the three leading markets for citrus exports from the United States. When looking at organic exports of citrus from the United States in 2022 there was 7.0 TMT worth \$10.4 million down from 21.4 TMT in 2017. Some of the changes in export volume can be explained by poor harvests in previous years and lower citrus imports which could be due to more being consumed domestically.

When looking at partners to grow U.S. citrus exports three major markets where the United States could grow its presence is China-Hong Kong, South Korea, and the European Union. Despite the multiple barriers when looking at each of these markets, there is potential for the United States to export larger volumes of organic products. Each of these countries consume a large volume of organic products, have a high disposable income, and are some of the world's major citrus importers. In the case of South Korea, there is the added benefit that the United States has little competition from other countries and is already the primary importer of citrus which could help growing organic exports specifically. Two smaller markets that could be considered are Peru and Singapore. Peru imports most of their oranges from the United States with no organic imports since 2019 and is a free trade partner with the United States which could help exporters avoid some of the barriers that exist when trading with other countries. Singapore is in a similar situation when looking at grapefruit. Most of the imported product comes from the United States and the country is a free trade partner with the United States. There is also a large market for oranges in Singapore that the United States is a competitor in. Each of these five countries have a developed market for citrus and many are already importers of organic products or U.S. citrus.

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