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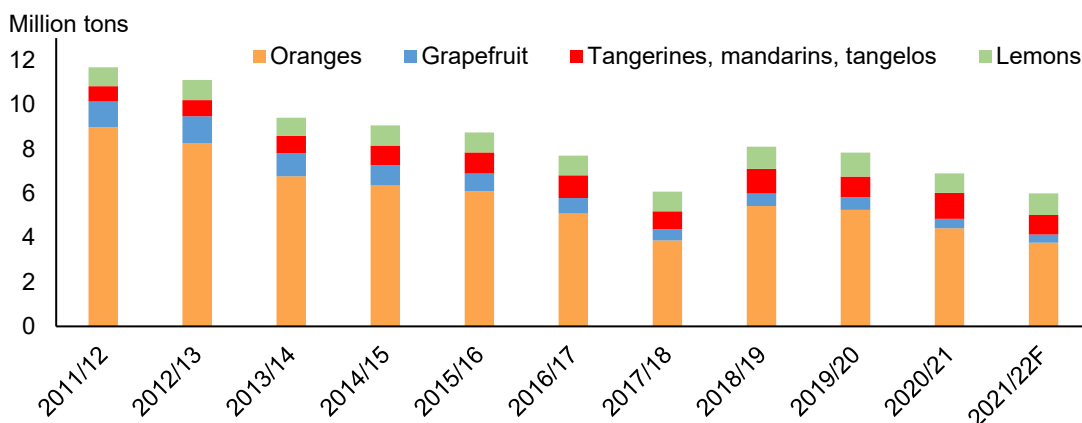
Fruit and Tree Nuts Outlook: March 2022

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Supplies in U.S. Citrus Market Forecast to be Record Low

The 2021/22 U.S. citrus crop is forecast to be 6 million tons, down 13 percent from the final output for the 2020/21 season. Declines in overall production are due to smaller orange and grapefruit crops in California, Florida, and Texas, and smaller mandarin crops in California and Florida. All orange production in the State of California is expected to decline by 5 percent, split between 4 percent reduction in non-Valencia orange production (navel and early/mid-season varieties) and a 9 percent reduction in Valencia oranges from last season. The Florida all orange supply forecast dropped by 5 percent from the February 2022 forecast and is expected to be 22 percent below last season. Orange supply is expected to be below levels of 2017/18 when Hurricane Irma hit Florida. Decreased production of oranges, grapefruit, and tangerines are expected to result in increased imports and higher prices compared to last year.

U.S. citrus production declines by 13 percent from previous season



F = forecast.

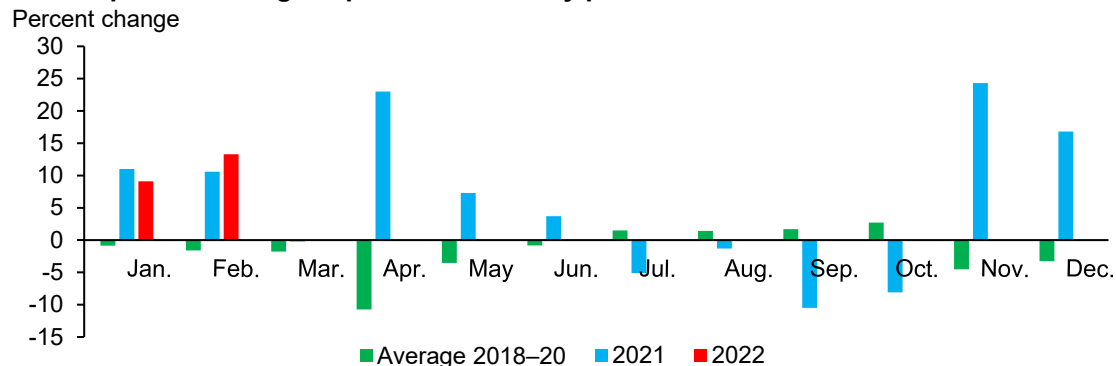
Source: USDA, National Agricultural Statistics Service, *Crop Production*, March 2022 issue, and *Citrus Fruit Summary*, various issues.

Price Outlook

Fresh Fruit Producer Price Index Increases at Start of 2022

The February 2022 fresh fruit producer price index (PPI) was 172.06 (1982 =100), up 4.5 percent from January 2022 and up 13.3 percent from February 2021 (figure 1). The February PPI increased for two consecutive years. Grower prices for fresh citrus, apples, and grapes increased in the beginning of the year driving up the PPI (table 1). USDA, Agricultural Marketing Service, *U.S. Mexico Canada Agreement Seasonal Perishable Products Weekly Update* continues to report weather events, transportation issues, and increasing input costs along the supply chain such as fuel, containers, labor, and other costs.

Figure 1
Annual percent change in prices received by producers for fresh fruit



Source: USDA, Economic Research Service using U.S. Department of Labor, Bureau of Labor Statistics data.

Higher citrus prices in the beginning of 2022 were the main driver for the increase in the fresh fruit PPI in February 2022. The citrus producer price index was up 1.1 percent in January 2022 compared to January 2021 and 15 percent in February 2022 compared to February 2021. The decreased citrus supply from Florida and California put upward pressure on prices.

Strong strawberry supplies from Florida and Mexico, the main sources of winter strawberries in the United States, eased early-winter strawberry prices in January. The US Apple Association reported lower than average apples in storage as of February 1, 2022, keeping prices strong. Total apple holdings were reported at 111.1 million bushels, 1.4 percent less than last February's total and 5.1 percent below the 5-year average.

Table 1--Monthly fruit prices received by growers, United States

Commodity	December		January		Year-to-year change	
	2020	2021	2021	2022	December	January
	-----Dollars per box-----				Percent	
Citrus fruit: ¹						
Grapefruit, all	15.95	15.63	17.88	14.04	-2.0	-21.5
Grapefruit, fresh	26.06	30.68	22.86	30.16	17.7	31.9
Lemons, all	23.23	21.08	21.99	17.96	-9.3	-18.3
Lemons, fresh	29.30	28.76	27.76	26.41	-1.8	-4.9
Oranges, all	11.30	11.62	10.95	12.20	2.8	11.4
Oranges, fresh	21.50	22.52	19.95	23.85	4.7	19.5
Noncitrus fruit:						
Apples, fresh ²	0.702	0.716	0.723	0.746	2.0	3.2
Grapes, fresh ²	1.050	1.220	1.140	1.645	16.2	44.3
Peaches, fresh ²	--	--	--	--	--	--
Pears, fresh ²	0.655	0.610	0.645	0.615	-6.9	-4.7
Strawberries, fresh	1.860	2.470	2.450	2.310	32.8	-5.7

-- Insufficient number of reports to establish an estimate.

¹ Equivalent on-tree price.

² Equivalent packinghouse-door returns for CA, MI, NY, and PA (apples only), OR (pears only), and WA (apples, peaches, and pears). Prices as sold for other States.

Note: Beginning in February 2020 estimates, all monthly price estimates for the noncitrus fruits are derived exclusively from data provided by USDA, Agricultural Marketing Service (AMS) and reflect freight-on-board shipping point basis.

Previously these estimates were based on a combination of survey data and information from AMS.

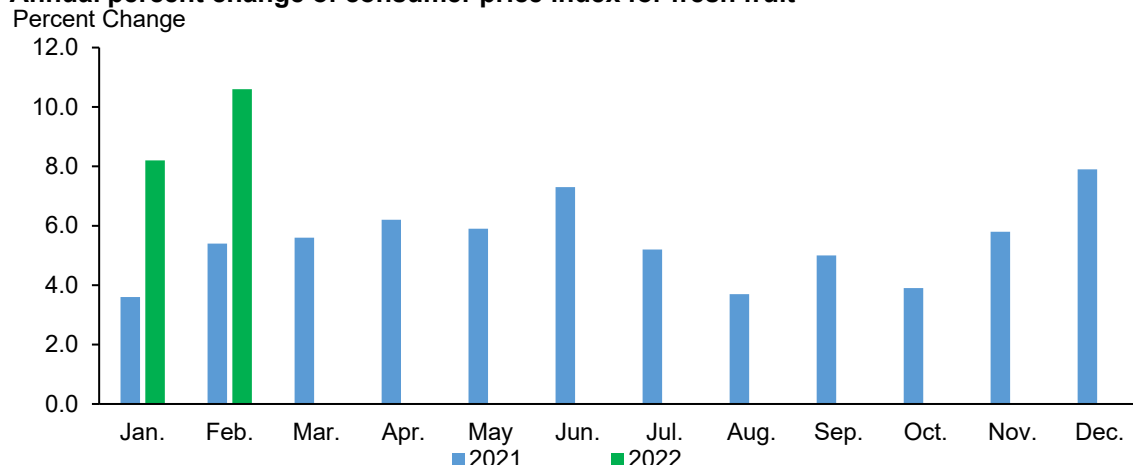
Source: USDA, National Agricultural Statistics Service, *Agricultural Prices*.

Consumer Price Index for Fresh Fruit in Early 2022 Increased

The Consumer Price Index (CPI) for fresh fruit was reported at 408.7 (1982–84 = 100) in February 2022, up 10.6 percent from last February (figure 2). U.S. retail prices for fresh fruit, based on data from the U.S. Department of Labor, Bureau of Labor Statistics (BLS) (table 2) were up compared to 2021, increasing the CPI during the first two months of 2022. Rising costs of inputs along the supply chain and logistical issues affecting grower prices are likely impacting consumer prices.

Figure 2

Annual percent change of consumer price index for fresh fruit



Source: U.S. Department of Labor, Bureau of Labor Statistics.

The overall low supplies of oranges boosted prices. February 2022 retail prices for navel oranges were \$1.45 per pound, a 9.4 percent increase from February 2021. An all-time low supply of orange juice from Florida, the dominant supplier, is putting upward pressure on prices. This increase represents the highest for orange juice prices since 2017, when Hurricane Irma decreased supply in Florida.

Strawberries are a popular fruit for Valentine’s Day, creating a higher demand for fresh strawberries in February. BLS data show the average retail price in the United States increased from \$2.89 per 12-ounce pint in February 2021 to \$3.05 in February 2022. While February 2022 retail prices decreased slightly from January 2022 as Florida’s strawberry production peaked in February. Banana average retail prices were \$0.63 per pound in the beginning of 2022. February data from AMS indicates that shipment volumes from Ecuador, Colombia, and Costa Rica were down, leading to overall decreased shipments which supports higher prices. Providing an indication of apple retail prices in general, the CPI for apples was up 7 percent in the beginning of 2022, likely due to tight supply.

Table 2--U.S. monthly retail prices for selected fruit, 2021–22

Commodity	Unit	2021		2022		2020–21 change	
		January	February	January	February	January	February
		-----1982–84 = 100 -----				--- Percent ---	
Fresh fruit		364.882	369.444	394.945	408.722	8.2	10.6
Apples		322.045	330.695	343.824	356.638	6.8	7.8
		--- Dollars ---		--- Dollars ---		--- Percent ---	
Fresh:							
Navel oranges	Pound	1.303	1.321	1.427	1.445	9.5	9.4
Orange Juice, 12 oz. can, per 16 oz.		2.341	2.359	2.621	2.754	12.0	16.7
Grapefruit	Pound	--	--	--	--	--	--
Lemons	Pound	--	--	2.078	--	--	--
Bananas	Pound	0.597	0.59	0.63	0.628	5.5	6.4
Peaches	Pound	--	--	--	--	--	--
Anjou pears	Pound	--	--	--	--	--	--
Strawberries ¹	12-oz. pint	3.044	2.893	3.106	3.045	2.0	5.3
Thompson seedless grapes	Pound	2.501	2.503	--	--	--	--

-- Insufficient marketing to establish a price.

¹ Dry pint.

² Data converted from 12-fluid-ounce containers.

Source: U.S. Department of Labor, Bureau of Labor Statistics.

Citrus Fruit Outlook

Smaller 2021/22 Harvest Expected for Oranges, Grapefruit, and Tangerines

The March 2022 U.S. citrus crop forecast for 2021/22 is 6 million tons, down 13 percent from the 2020/21 final utilized total of 6.9 million tons (table 3). This 2021/22 forecast is 1.6 percent below the initial USDA, National Agricultural Statistics Service (NASS) forecast of 6.1 million tons released October 2021. If forecast production is realized, the 2021/22 crop would be the smallest crop in more than 50 years. As of the March 2022 NASS *Crop Production* report, U.S. all-orange production is forecast at 3.8 million tons in 2021/22, down 15 percent from 2020/21. Production of tangerines (a commodity group including tangerines, mandarins, and tangelos) is expected to be 25 percent below 2020/21 levels at a total of 878,000 tons. Lemons is the only citrus commodity forecast to reach production levels above last season, at 976,000 tons, 10 percent higher than last season. The decline in overall citrus production this season can be attributed to decreases in Florida orange and grapefruit production, and moderate decreases in California production of the same commodities.

Orange Production Down 15 Percent

Total orange production for the United States in the 2021/22 season (November–October) is forecast down from last year by 15 percent. This decrease is due to smaller crops of Valencia oranges in California and Florida, and non-Valencia oranges (including navel and early/mid-season varieties) in California, Texas, and Florida. The March 2022 forecast suggests total utilized production of oranges in the United States will be below the levels observed in the aftermath of Hurricane Irma (2017/18).

Orange production in Florida is forecast down this season by 22 percent at 1.85 million tons. The early/mid-season non-Valencia crops are down in that State by 4.5 million boxes or 203,000 tons. At the same time, Valencia orange production is projected to be down by 7.1 million boxes or 320,000 tons from last year. Droppage of Valencia oranges in Florida was estimated at 47 percent in March 2022, 38 percent higher than the same period last season. Slightly larger Valencia fruit this season may somewhat temper yield losses due to droppage. Droppage of non-Valencia varieties was observed at 28 percent, which is below last season's droppage rate of 37 percent. High droppage rates and lower yields in Florida can be attributed to the ongoing effects of citrus greening.

Texas generally accounts for less than 2 percent of U.S. commercial orange production. As of the January 2022 forecast, orange production was down by 62 percent compared to last year. This decrease in Texas production can largely be attributed to the lingering effects of Winter Storm Uri, which plunged the State into below freezing temperatures for several days in February 2021, damaging fruit set for the 2021/22 season.

Table 3--Citrus: Utilized production, 2019/20, 2020/21, and forecast for 2021/2022

Crop and State	Utilized		Forecast for	Utilized		Forecast for
	2019/20	2020/21	2021/22 as of 03-2022	2019/20	2020/21	2021/22 as of 03-2022
	---- 1,000 boxes ² ----			---- 1,000 tons ----		
Oranges:						
Non-Valencia³						
California	43,300	40,600	39,000	1,732	1,624	1,560
Florida	29,650	22,700	18,200	1,334	1,022	819
Texas	1,150	1,000	300	49	43	13
Total ⁴	74,100	64,300	57,500	3,115	2,688	2,392
Valencia:						
California	10,800	9,500	8,600	432	380	344
Florida	37,750	30,100	23,000	1,699	1,355	1,035
Texas	190	50	100	8	2	4
Total	48,740	39,650	31,700	2,139	1,737	1,383
All oranges	122,840	103,950	89,200	5,254	4,425	3,775
Grapefruit:						
California	4,700	3,900	3,500	188	156	140
Florida	4,850	4,100	3,900	206	174	166
Texas	4,400	2,400	1,600	176	96	64
All grapefruit	13,950	10,400	9,000	570	426	370
Tangerines, mandarins, and tangelos:						
California	22,400	28,100	21,000	896	1,124	840
Florida	1,020	890	800	48	42	38
All tangerines, mandarins, and tangelos	23,420	28,990	21,800	944	1,166	878
Lemons:						
Arizona	1,800	800	1,400	72	32	56
California	25,300	21,300	23,000	1,012	852	920
All lemons	27,100	22,100	24,400	1,084	884	976
All citrus	187,310	165,440	144,400	7,853	6,901	5,999

¹The crop year begins with bloom of the first year shown and ends with completion of harvest the following year.

²Net pounds per box: oranges in California (CA)-80, Florida (FL)-90, Texas (TX)-85; grapefruit in CA-80, FL-85, TX-80; lemons-80; tangelos-90; tangerines and mandarins in CA-80, FL-95.

³ Non-Valencia varieties include navel and various early and mid-season varieties of oranges.

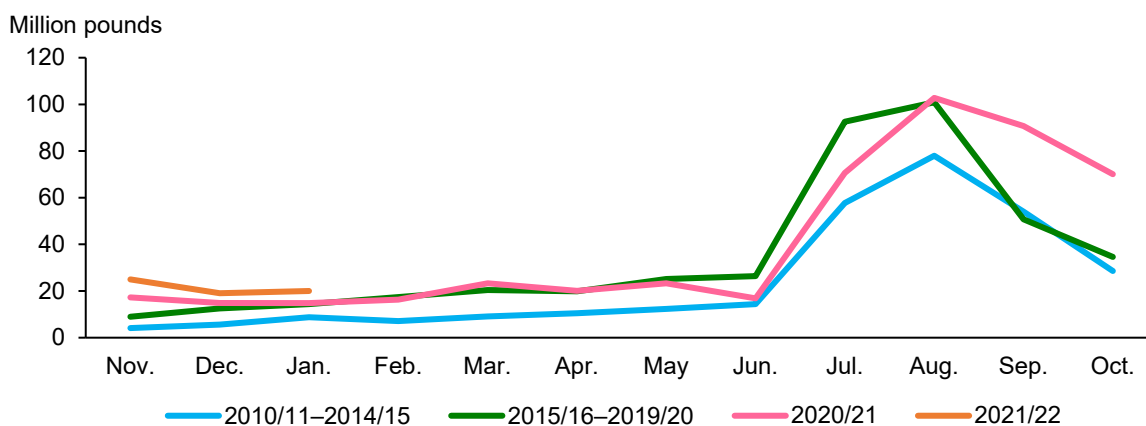
⁴Totals may not be equivalent to the sum of the categories due to rounding.

Source: USDA, National Agricultural Statistics Service, *Crop Production*, March 2022, and *Citrus Fruits 2021 Summary* (August 2021).

Counter seasonal U.S. imports allow for year-round availability of fresh oranges for U.S. consumers. Import levels of fresh oranges tend to rise after June and peak in July or August, then rapidly taper down before bottoming out in November (figure 3). Imports of fresh oranges for the 2021/22 season to date (November 2021–January 2022) are up 36 percent compared to

the same time last year. The average grower price of fresh oranges as reported by NASS for the period from November 2021–January 2022 is \$23.05 per box, up 5 percent from the same period last year. This increase in prices in conjunction with higher imports is reflective of lower domestic production levels. ERS predicts total U.S. fresh orange imports will reach 276,000 tons in 2021/22. Chile and Mexico are estimated to remain the largest suppliers of fresh market oranges to the United States this season followed by South Africa, Australia, and Colombia. Import shipments from Chile are up 320 percent from this time last year (November 2021–January 2022), while shipments from Mexico are up 28 percent from the same period last year.

Figure 3
Seasonal fresh orange imports rise leading into the 2021/22 season



Note: Fresh orange season is from November to October.

Export volumes of fresh oranges are down 5 percent so far this season (November 2021–January 2022) compared with the same period last year. With the bulk of U.S. fresh orange exports occurring in the spring, it has yet to be seen how total exports will fare this season. U.S. Census Bureau data show declines in season-to-date exports to Canada of 4 percent (a decrease of 1,400 tons), Hong Kong 29 percent (a decrease of 4,400 tons) and Australia by 27 percent (a decrease of 2,500 tons). In contrast, higher export levels to South Korea, Japan, and Mexico, have been observed so far in the 2021/22 season compared to the same period last year, with exports to South Korea alone increasing by 4,400 tons. USDA, Economic Research Service (ERS) forecast total U.S. fresh orange exports to reach 494,000 tons in 2021/22, down 5 percent from last season. Overall lower export levels from the United States this season are expected, given reduced domestic production and higher domestic grower prices.

Florida Orange Juice Production Forecast Record Low

Based on current estimates, 59 percent of U.S. oranges will go to processing in the 2021/22 season. Most oranges for the processing market are grown in Florida. As of mid-February 2022, harvest of Valencia oranges in the State is still in the early stages. The average processing orange price reported by NASS in January 2022 was \$6.73 per box, 3 cents higher than the same time last year.

USDA, ERS forecasts orange juice production in 2021/22 to be down from last year, with total production at 286 million single-strength equivalent (SSE) gallons (table 4). If realized, this volume will be the lowest in more than 50 years. To compensate for lower production, U.S. orange juice imports are expected to increase over last year reaching more than 400 million gallons. Mexico and Brazil are the main suppliers of orange juice imports into the United States, accounting for a combined 93 percent. Higher production volumes of orange juice are projected for both Brazil and Mexico in the 2021/22 season which may also contribute to higher import volumes.

U.S. exports of orange juice are expected to reach a record low of 41 million SSE gallons this season. Canada will remain the primary foreign destination for U.S. orange juice, accounting for more than two-thirds of all U.S. orange juice exports.

Even with higher expected imports and lower exports, total domestic availability of orange juice, a proxy for consumption, is forecast down this season. This is corroborated by sales data as of March 2022 from the Florida Department of Citrus, indicating that retail sales of orange juice are down by 3.4 percent season to date.

Table 4 -- United States: Orange juice supply and utilization, 2011/12 to 2021/22F

Season ¹	Beginning Stocks	Production	Imports	Total Supply	Exports	Domestic consumption	Ending Stocks	Per capita Availability
-----Million SSE gallons ² -----								<i>Gallons</i>
2011/12	391	959	223	1574	154	971	449	3.10
2012/13	449	847	421	1717	159	1024	534	3.25
2013/14	534	663	418	1615	158	974	483	3.07
2014/15	483	592	460	1534	113	908	512	2.84
2015/16	512	503	390	1406	92	894	420	2.78
2016/17	420	422	419	1262	79	809	374	2.49
2017/18	374	271	576	1220	48	808	364	2.48
2018/19	364	465	482	1310	42	744	524	2.27
2019/20	524	418	292	1234	48	778	408	2.36
2020/21	408	320	396	1125	44	725	356	2.19
2021/22F	356	286	404	1046	41	620	345	1.86

¹Season begins in October of the first year shown.

²SSE = single-strength equivalent.

F= forecast.

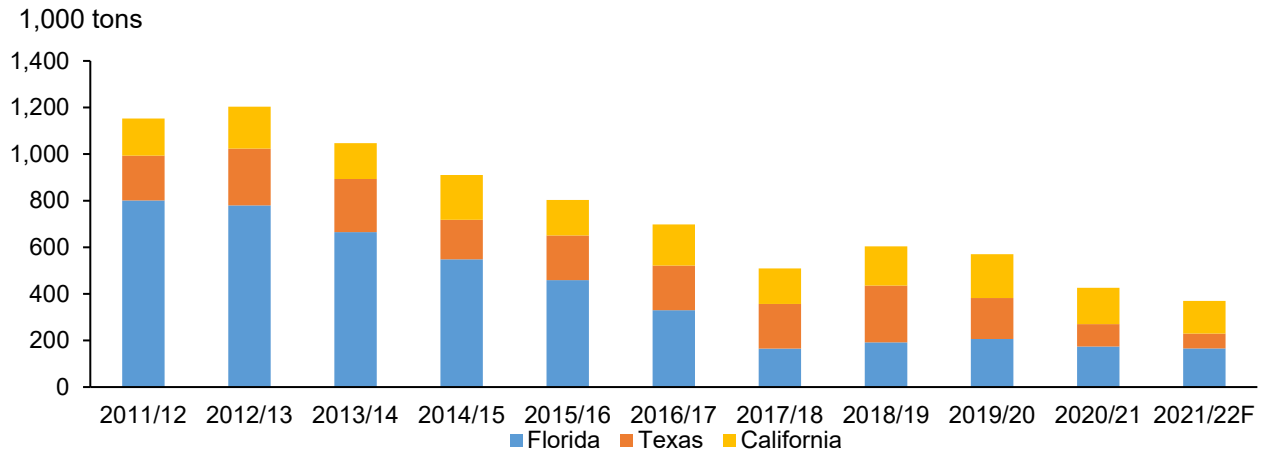
Source: USDA, Economic Research Service.

Grapefruit Production Expected to Decline in 2021/22

Total U.S. grapefruit production is projected down 13 percent to 370,000 tons in 2021/22 from 426,000 tons in 2020/21 (figure 4). This volume is 16 percent lower than the initial NASS forecast made in October 2021. Production is forecast down in all commercially producing States. Texas production is forecast 33 percent below the record low of last season due to lingering effects of last year's Winter Storm Uri (February 2021).

The Row Count Survey conducted by NASS in Florida groves in late February 2022 indicated that 73 percent of grapefruit rows were already harvested. Current fresh grapefruit prices are registering higher than the 5-year average. The U.S. fresh grapefruit average grower price from November 2021 to January 2022 was \$31.77 per box, 23 percent above the average price from the same period last season (table 5).

Figure 4
Total U.S. grapefruit production 2011/12–2021/22



F = forecast.

Sources: USDA, National Agricultural Statistics Service, *Crop Production*, March 2022 issue, and *Citrus Fruit Summary*, various issues.

So far, U.S. fresh grapefruit import volumes for the current season (September 2021–January 2022), were up 87 percent compared with the same period in 2020/21. This increase in imports includes higher volumes from Mexico, South Africa, Peru, and China. Season-to-date fresh grapefruit exports were down 36 percent, mostly because of 3,142 fewer tons sent to Korea, 2,638 fewer tons sent to Japan, and 5,196 fewer tons sent to France season to date. Higher volumes were sent to Belgium compared to the same period last season (412 percent) and the United Kingdom (5 percent).

U.S. grower prices for processed grapefruit for January 2022 were lower than the same period last season. The Florida Department of Citrus February sales report indicates the retail grapefruit juice sales volume is down 3.7 percent season to date. The same report indicates retail grapefruit juice prices are up by 4.8 percent, which suggest higher year-over-year grower prices in the coming months.

Table 5--Fresh grapefruit: Average equivalent on-tree prices received by U.S. growers, 2016/17–2021/22

Month	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22
----- Dollars per box -----						
October	22.63	26.67	25.89	18.85	26.20	--
November	16.33	24.32	24.65	18.95	28.14	34.47
December	16.18	22.33	24.25	18.33	26.06	30.68
January	16.48	22.7	22.23	17.30	22.86	30.16
February	16.76	22.46	22.11	16.31	24.84	
March	18.19	22.71	19.38	17.99	23.02	
April	20.90	22.45	19	--	--	
May	--	--		--	--	
Nov.-Jan. average	16.33	23.12	23.71	18.19	25.69	31.77

¹The net weight of a grapefruit box for Florida: 85 lb. for California: 80 lb. for Texas: 80 lb.

Source: USDA, National Agricultural Statistics Service, *Agricultural Prices*, various issues.

Lemon Production Forecast Up in 2021/22

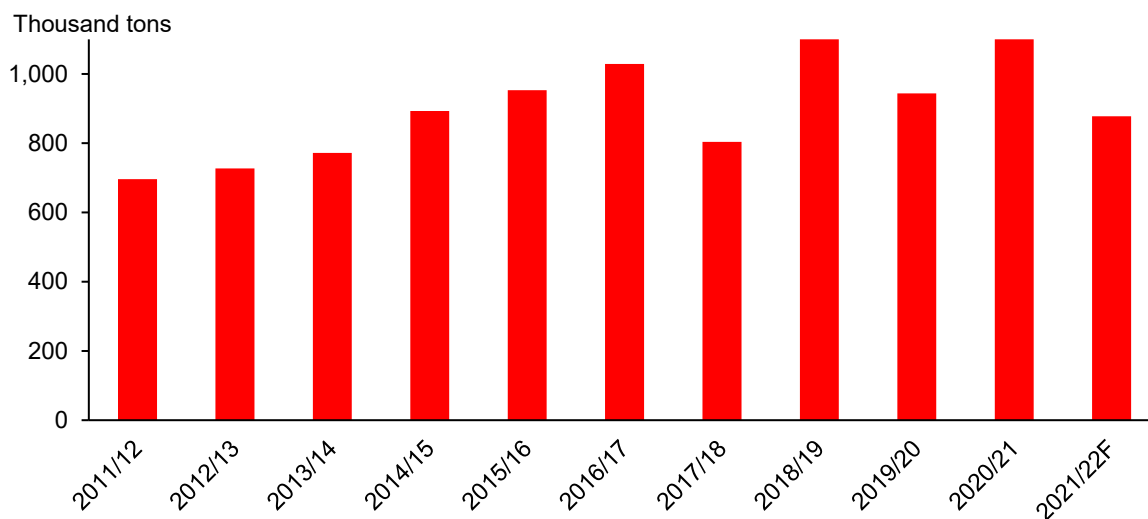
The U.S. lemon crop for the 2021/22 marketing season (August 2021–July 2022) is anticipated to be 976,000 tons, up 10 percent from 2020/21 total utilized production. Ninety-four percent of lemons commercially grown in the United States are from California, and the larger expected crop in California is leading to the overall increase in the U.S. lemon crop for 2021/22. In addition, the Arizona crop is forecasted to increase 75 percent over last season to 56,000 tons. Despite higher projected domestic production this season, prices are up 5 percent from the same time last year. Fresh lemon grower prices for this current season (August 2021–January 2022) averaged \$30.35 per box, compared to \$29.03 over the same period in 2020/21. Fresh lemon imports are up year-to-date (August–January) by 30 percent compared to the same period last season. Lemon imports from Chile and Argentina are up 39 percent and 116 percent, respectively, compared to the same period last year, which more than offset lower imports from Mexico (down 7 percent). Fresh lemon exports are down 2 percent year to date at 38,000 tons with significant quantities going to Japan (28 percent), Canada (35 percent), and South Korea (15 percent).

Tangerine, Mandarin, and Tangelo Crops Forecast Down from Last Season

Total production of U.S. tangerines, a commodity group including tangerines, mandarins, and tangelos, is forecast at 878,000 tons in the 2021/22 season (November–October). If realized, this quantity will be a 25 percent decrease from the 2020/21 final production levels. Tangerine production in the United States has generally followed a trend of growth over the last 20 years

with an average annual increase of 5 percent since the 2001/2002 season. This smaller expected harvest will be a departure from that trend (figure 5). Smaller harvests are forecasted in both California and Florida this season, with 95 percent of all domestic production occurring in the State of California. Imports are up by 142 percent season to date (November–January). Although present trends regarding imports are unlikely to continue, total imports are expected to reach record levels this season surpassing the 2019/20 season of 431,000 tons. Meanwhile, year-to-date exports declined 16 percent with Canada, Mexico, and Australia receiving 78.5, 9.5, and 5.5 percent of U.S. tangerine exports, respectively.

Figure 5
Total U.S. tangerine, mandarin, and tangelo production 2011/12–2021/22



F = forecast.

Sources: USDA, National Agricultural Statistics Service, *Crop Production*, March 2022 issue, and *Citrus Fruit Summary*, various issues.

Noncitrus Fruit Outlook

Strawberry Supplies Strong in Early 2022

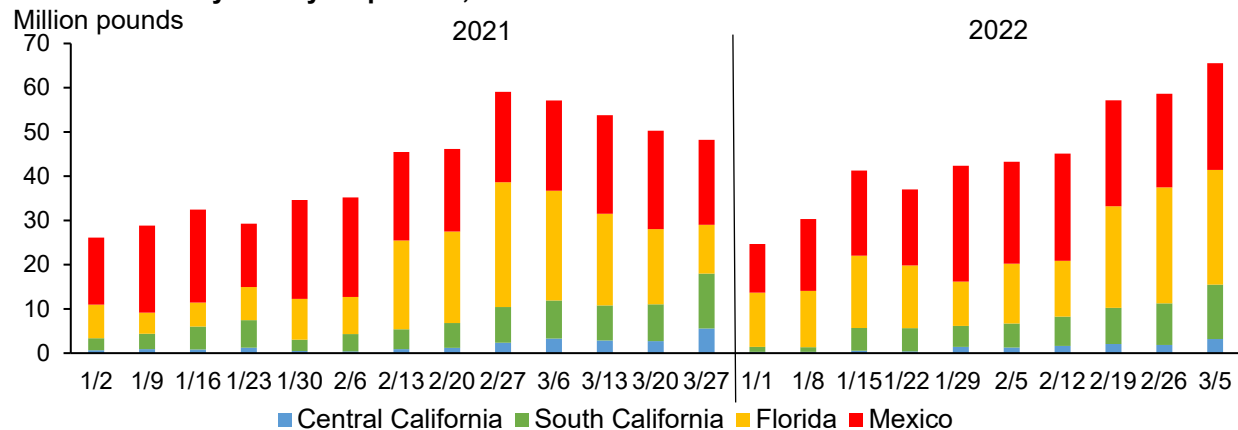
USDA, Agricultural Marketing Service (AMS) data show total strawberry shipments (January 2022 to March 5, 2022) up 13 percent from the same time period last year (figure 6). The year started with tight supplies of strawberries from California due to rains in October and cold temperatures. Good weather in Florida helped increase supply in January. In February, supplies increased in California while Florida's supply declined slightly which may have been a result of freezing temperatures. Total shipments in February 2022 compared to February 2021 were up: Mexico up 13 percent, Florida down 3 percent, and California up 35 percent. AMS strawberry shipping point prices and U.S. Department of Labor, Bureau of Labor Statistics (BLS) strawberry retail prices both started high in January and declined in February 2022 as more supplies entered the market.

As of March 5, AMS' *U.S. Mexico Canada Agreement Seasonal Perishable Products Weekly Update* reported Mexico strawberry crossings through Texas were very slow at lower prices. Quality and condition reported as variable. Rain was forecast for Baja California, with growers harvesting heavily ahead of the impending weather. Some shippers began diverting product to processing as heavy volumes drove down prices. Strong winds may result in scarred and misshapen berries. Movement of strawberries out of Santa Maria, California, was expected about the same. Quality and condition were reported as variable. Damages from frost the first week of March may be limited to bloom drops leading to production gaps by mid- to late-March.

Based on the annual acreage survey conducted by the California Strawberry Commission, total California strawberry acreage in 2022 is 38,026. Fall planted acres in 2021 increased 6.4 percent from the same period last year and will reach peak production in late spring through summer. Due to increased fall planting, spring production in 2022 is expected to be greater than 2021.

Figure 6

Fresh strawberry weekly shipments, 2021 and 2022



Note: Data are for the week ending with the indicated date. Shipments are conventional only.
 Source: USDA, Agricultural Marketing Service, *Market News*, Movement Data.

Fresh and Processing Strawberry Supplies Up in 2021: U.S. shipments increased slightly in 2021. The California Strawberry Commission reported that total State shipments in 2021 were 1,916 million pounds, up 1 percent from the previous year. Fresh strawberry import volume in 2021 (almost all from Mexico) increased 22 percent over the previous year. In 2021, organic imports were added to the Census Bureau trade codes and accounted for 4 percent of U.S. strawberry fresh imports in that year. In 2021, exports increased roughly 1 percent compared to the previous year. Availability of fresh strawberries for the domestic market increased roughly 4 percent.

The Processing Strawberry Advisory Board of California reported the 2021 pack estimate for frozen strawberries in the United States at 353.9 million pounds, down 2 percent from the previous year. With a lower pack, lower beginning stocks, and an increase in frozen imports, domestic availability increased slightly. The import share of frozen strawberry availability in the United States grew from 50 percent in 2020 to 60 percent in 2021. Mexico’s market share of imports declined slightly from 2020 to 55 percent in 2021 while the import share from Chile increased slightly to 20 percent in 2021.

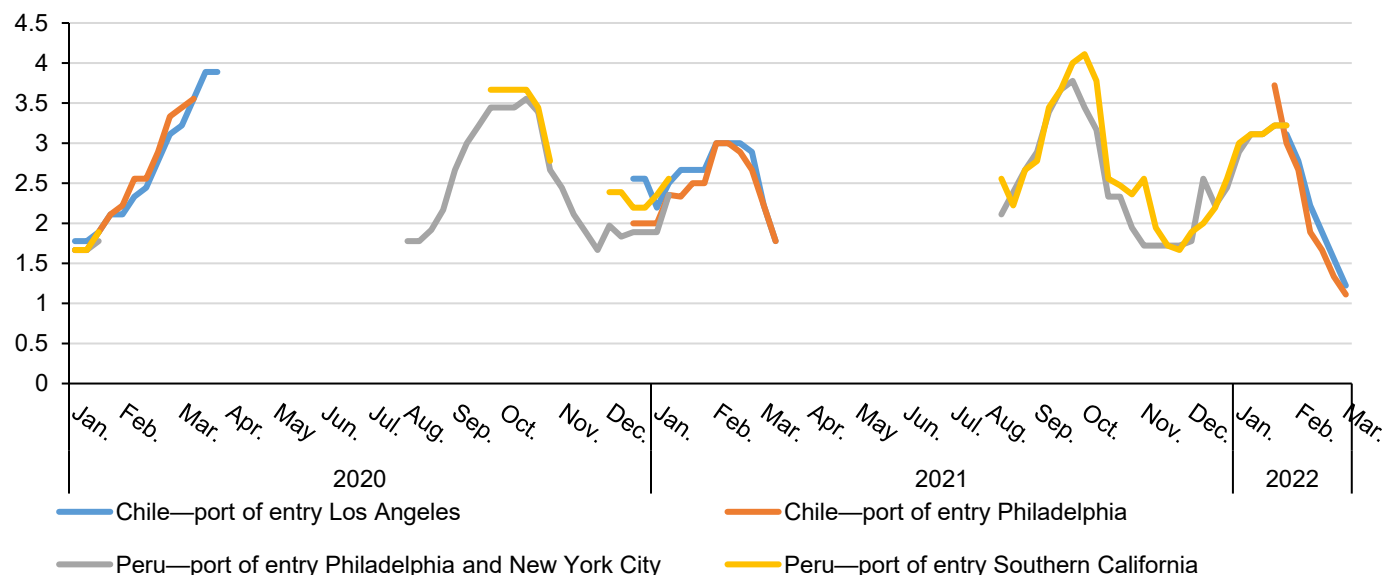
High Blueberry Prices Start Strong in 2022

2022: The year started with high prices for fresh blueberries from Chile. Peru and Chile are the main suppliers to the United States in the winter months. Shipments from Chile tend to increase in January and February after Peru’s exports to the United States begin to taper off. Total January 2022 fresh blueberry imports increased 20 percent, imports from Chile were up 14 percent despite labor and transportation issues. January 2022 shipments from Peru to the

United States increased 64 percent compared with January 2021. The average mostly high shipping point prices for imports from Chile were about \$3 per pound for 12 1-pint cups with lids compared to \$2.5 per pound in January 2021 (figure 7). As supplies from Chile and Peru decline, Mexico and Florida's supply will start to increase, California tends to produce small amounts during the winter before the main season which goes from March through October. Freezing temperatures in Florida in mid-March could impact the blueberry crop; however it is too early to tell.

Figure 7
Monthly shipping point price, Chile and Peru, 2020 to 2022

Dollars per pound



Note: Prices are converted from package of flat, 12 1-pint cups with lids. Prices are an average of mostly high shipping point prices from port of entry. USDA, Agricultural Marketing Service estimates the mostly high price as a price that represents at least 50 percent of the sales in the market and does not include the absolute lowest or highest price.

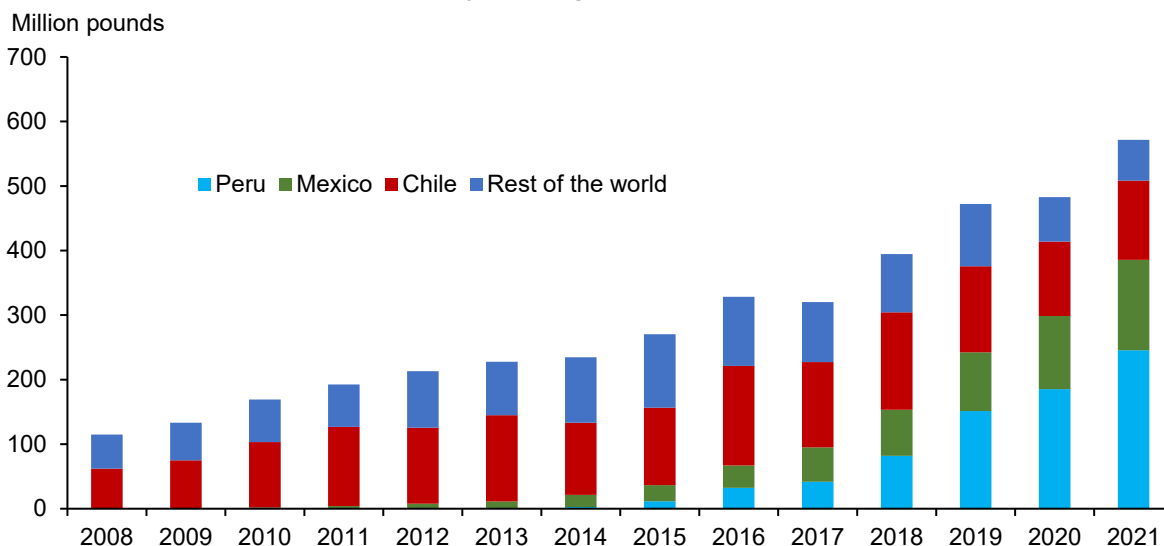
Source: USDA, Economic Research Service using USDA, Agricultural Marketing Service, *Market News*, Shipping Point Data.

2021: The North American Blueberry Council (NABC) estimated the 2021 total U.S. blueberry crop at 656.6 million pounds, up 5 percent from the previous year, with 359.5 million pounds for the fresh market and 297.2 million pounds for the processing market. Fresh production increased in Oregon, Georgia, and Washington and decreased slightly in California and Michigan.

U.S. fresh blueberry imports reached another record high of 571 million pounds, an 18 percent increase from the previous year's volume (figure 8). Imports from Peru and Mexico grew 32 and 24 percent, respectively, increasing their share of the U.S. fresh blueberry import market. In 2021, Peru's organic blueberry imports rose to 36 million pounds from about 14 million pounds in the previous year, making up 40 percent of U.S organic blueberry imports in 2021. Total fresh

blueberry imports increased slightly from Chile in 2021, with conventional blueberries down less than 1 percent and organic blueberries up 36 percent. In 2021, U.S. blueberry exports increased 40 percent from 2020 to 83.6 million pounds. U.S. exports were up to Canada, which accounted for 96 percent of U.S. fresh blueberry exports in 2021.

Figure 8
Peru's market share in the U.S. blueberry market grows



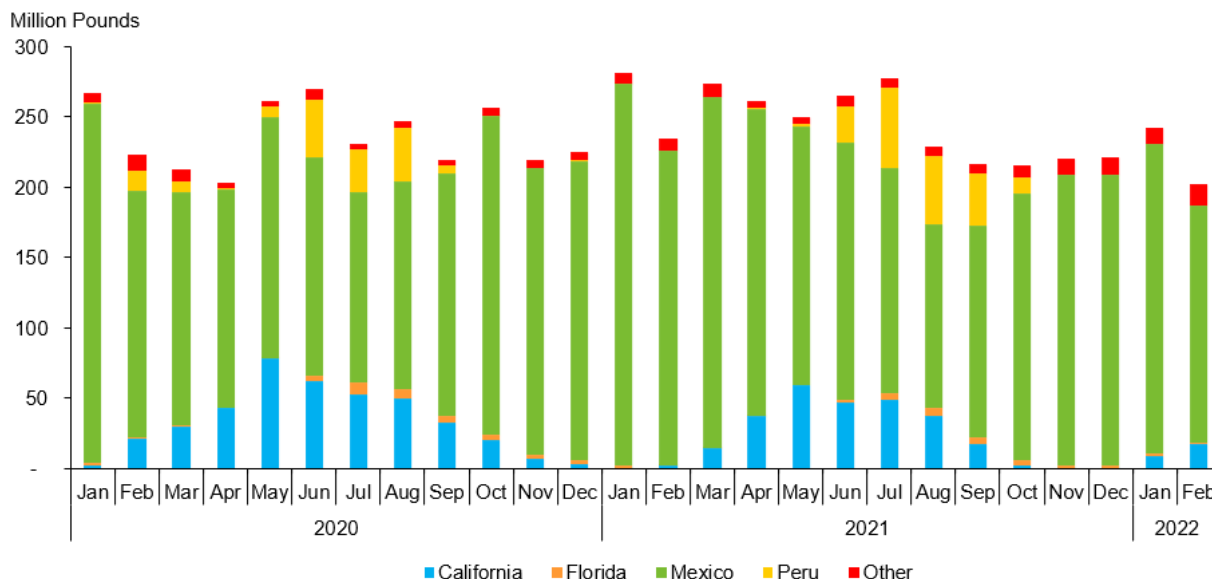
Source: U.S. Department of Commerce, Bureau of Census data.

2021/22 Avocado Crop Expected Up

California is the top producing U.S. State for avocados. The California Avocado Commission (CAC) projects 2021/22 production at 306 million pounds, up 13 percent from the previous season. The CAC 2021/22 season projection is up from last season, following the alterative-bearing nature of the tree, where a year of higher production tends to follow a year of lower production.

For the 2021/22 season, timely December rains improved avocado tree conditions in California. Agricultural Marketing Service (AMS) shipment volumes from California in January and February 2022 were higher than the same months in 2020 (up 18 percent) and 2021 (up 996 percent) (figure 9). Good weather and market conditions led to earlier shipments than usual which may lead to lower shipment volumes of California avocados in the late summer months.

Figure 9
Domestic and imported avocado shipments for January 2020 through February 2022 Monthly



Source: USDA, Economic Research Service using data from USDA, Agricultural Marketing Service, *Market News*, Movement data.

The United States imported a record 2.68 billion pounds of avocados (up 8.7 percent) in 2021 compared with 2.46 billion pounds the previous year. In 2021, fresh avocado import volumes came from, in declining order, Mexico (89.4 percent), Peru (7 percent), Dominican Republic (3 percent), Chile (0.3 percent), and Colombia (0.3 percent). Mexico experienced record production during its 2020/21 season. In October 2021, USDA, Foreign Agricultural Service forecast Mexico’s 2021/22 avocado production 8 percent lower than its record high production last season.

In January 2022, U.S. imports were down 17 percent compared to January 2021 likely due to the smaller crop in Mexico. During January 2022, the mostly high average shipping point prices for a 2-layer carton of Hass, conventional avocados, sizes 40/48/60, averaged \$48.94 compared to \$23.05 in 2021. Some factors influencing this 112 percent increase in price are a slight shortage of trucks, higher freight rates, and lower Mexican production compared to the previous marketing year.

On February 12, 2022, the United States suspended imports of avocados following safety concerns for Animal and Plant Health Inspection Service (APHIS) avocado inspectors in Mexico. The ban was short lived, with trade resuming on February 18, 2022. Following the suspension, prices climbed higher during the last week of February, averaging 80 percent more (Hass, conventional, sizes 40/48/60) than the same week last year.

Melons Outlook

Domestic Melon Production Down While Imports Rise in 2021

Watermelon: Domestic utilized production of watermelon totaled 3.37 billion pounds in 2021, down 2 percent from the previous year (table 6). This year-over-year decline is mostly due to a 7 percent decrease in Georgia's production due to cooler spring weather and a 35 percent decrease in Texas due to Winter Storm Uri (February 2021). Despite the overall decline, Florida production increased 13 percent from last year as a result of timely summer rains.

U.S. imports of watermelons increased by 7.8 percent in 2021 compared to the previous year. The increase in imports offset the slight drop in domestic production and put downward pressure on average grower prices in 2021, which dropped 5 percent compared to 2020. The United States increased watermelon export volumes in 2021 by 4 percent compared to the previous year. Canada was the main destination for U.S. watermelon exports, accounting for 99 percent of volume in 2021.

January 2022 watermelon imports were up 24 percent from the same month last year. The three largest suppliers of watermelon in January include: Mexico (up 29 percent), Guatemala (up 15 percent), and Honduras (up 38 percent). For the first 4 weeks of 2022, mostly low and mostly high shipping point prices for 24-inch bins of red flesh seedless watermelon were up slightly from a year ago. Higher fuel costs and port delays may contribute to slightly higher watermelon prices through the first half of 2022 compared with last year.

Table 6--U.S. melons: Supply and utilization, by type and all, 2019–21

Year	Supply			Utilization		Per capita use	Trade share of:	
	Production ¹	Imports ²	Total	Exports ³	Total		Use imported	Supply exported
	----- Million pounds -----			----- Pounds -----			----- Percent -----	
Cantaloupe³								
2019	1,129.5	873.4	2,002.9	130.7	1,872.2	5.7	46.6	6.5
2020	1,121.8	753.2	1,875.1	105.1	1,770.0	5.4	42.6	5.6
2021	1,056.2	762.1	1,818.2	101.8	1,716.4	5.2	44.4	5.6
Honeydew⁴								
2019	260.1	211.7	471.8	37.6	434.2	1.3	48.8	8.0
2020	219.6	230.6	450.2	45.5	404.7	1.2	57.0	10.1
2021	176.0	346.9	522.8	63.8	459.0	1.4	75.6	12.2
Watermelon								
2019	3,579.2	1,728.9	5,308.1	321.9	4,986.3	15.2	34.7	6.1
2020	3,439.3	1,658.0	5,097.2	359.8	4,737.4	14.4	35.0	7.1
2021	3,370.3	1,787.5	5,157.8	375.0	4,782.8	14.4	37.4	7.3
All melons								
2019	4,968.8	3,025.4	7,994.2	527.7	7,466.6	22.8	40.5	6.6
2020	4,780.7	2,784.3	7,565.0	538.5	7,026.5	21.3	39.6	7.1
2021	4,602.4	2,917.9	7,520.3	544.5	6,975.7	21.0	41.8	7.2

¹Source: USDA, National Agricultural Statistics Service.

²Source: U.S. Department of Commerce, Bureau of the Census.

³NASS survey data from 2019 to 2021 includes: Arizona, California, Florida, and Georgia.

⁴Honeydews do not have a separate tariff code. USDA, Agricultural Marketing Service import shipment data was used to estimate the portion of import honeydew and "other" melons for 2019–21.

Source: USDA, Economic Research Service.

Cantaloupe: In 2021, total U.S. utilized production declined by 6 percent from the previous year. Despite increasing planted acres in California, the largest producing State, higher input costs and limited water supply in some areas contributed to a reduction in yield (down 10.6 percent) and production (down 4.5 percent) compared to 2020. In Arizona, the second largest producer of cantaloupe, planted acres decreased by 17 percent, which led to a 10.1 percent drop in utilized production compared to the previous growing season.

For 2021, U.S. cantaloupe import volume increased 1.2 percent from the previous year, but still finished 32 percent below its all-time high in 2000. In 2021, 65.8 percent of U.S. cantaloupe import volume came from Guatemala, 22.1 percent came from Honduras, 8.1 percent from Mexico, and 3.9 percent from Costa Rica. The United States exported 101.8 million pounds of cantaloupe in 2021, which represented 9.6 percent of utilized production. The two main destinations for U.S. cantaloupe exports are Canada and Mexico; together they accounted for about 97 percent of the U.S. cantaloupe export market share in 2021.

USDA, NASS data reported 2021 cantaloupe grower prices at \$0.26 per pound, a 1.2 percent increase from the previous year. However, better growing conditions in Central America increased the global supply compared to the previous season, which put downward pressure on prices in January and February 2022. In the first two months of 2022, average cantaloupe prices (based on AMS shipping price data) fell about 50 percent compared to the same months last year.

Honeydew: In 2021, utilized honeydew production in California totaled 176 million pounds, down 19.9 percent from the previous year. Higher input costs and limited water supply in some growing areas in California contributed to a reduction in both acreage (down 4.2 percent) and yield (down 16.4 percent) in 2021 compared to the year before. The decline in volume contributed to a 33 percent increase in the average grower price per pound (USDA, NASS) compared to the previous year.

In February 2021, honeydew imports came from, in declining order, Honduras, Guatemala, Mexico, and Brazil (based on AMS shipment data). In February 2022 total shipments increased 36 percent. Imports were up 56 percent from Honduras, up 19 percent from Guatemala, up 45 percent from Mexico, and down 45 percent from Brazil. USDA, AMS shipping point prices in February 2022 for honeydews, two-thirds carton packages, ranged from a mostly low of \$10.00 to a mostly high of \$15.95, up from the previous year's prices of a mostly low of \$5.00 to a mostly high of \$12.95.

Tree Nuts Outlook

U.S. Pecan Production Is Expected Down in 2021/22

Unfavorable weather is expected to reduce total pecan production in 2021/22 (October–September). In Georgia, the top pecan producer in 2020/21, harvest is expected to be down from the record high production last season. The USDA, AMS Weekly *Pecan Report* states the pecan harvest in Georgia started later than in previous years due to a cold spring and rainfall at the start of the season. In 2022, NASS suspended the *Pecan Production* report that contains preliminary acreage, yield, and production estimates.

In 2020/21, the total pecan production was 152.7 million pounds (shelled basis), up 13 percent from the previous year, in part due to the alternative bearing cycle of pecan trees and good growing conditions. The U.S. average grower price for pecans declined from \$1.84 per pound in 2019 to \$1.43 per pound in 2020 likely due to the increase in production and record high beginning stocks. Lower domestic production this season likely will put upward pressure on prices.

Total imports of shelled and inshell pecans—mostly from Mexico—are down 26 percent in October 2021 to January 2022 compared with the same period the previous season. Mexico experienced drought conditions during the growing season.

With the smaller domestic crop in 2021/22, exports are down this season (October 2021–January 2022). U.S. shipments to China decreased 74 percent compared to the same period last season (October 2021–January 2022), which was one of the top markets for U.S. pecans in 2021. There were no shipments to China in January 2022 which could be due a decrease in demand and high prices.

U.S. Pistachio Production Strong for Off-Year

Based on data from the Administrative Committee for Pistachios (ACP), the U.S. pistachio crop for the 2021/22 season (September–August) is forecast to reach 1.15 billion pounds in-shell basis, equivalent to 560 million pounds shelled basis, up 7 percent from record high on-year production in the previous season. ACP reports average per acre yields up less than 1 percent in 2021 to 2,822 pounds from the previous year. Over 36,700 bearing acres were added in 2021

from the previous year. Grower prices decreased slightly last year despite the record high production, signaling strong demand.

The USDA, Foreign Agricultural Service forecast Iran's pistachio production, the second largest producer after the United States, to decrease in 2021/22 due to rain and freezing temperatures. U.S. imports for 2021/22 are estimated down 30 percent from the previous season. With high beginning stocks and increased estimated production in 2021/22, domestic supply is expected to rise.

U.S. pistachio exports are up 24 percent from September 2021 to January 2022 compared with the same time last year. Exports were down to the top market China in December; however, they increased in January. Some reasons for the decrease in December exports despite the high supply likely include: China may have stocked up early in the season for the Chinese New Year and logistical issues and high shipping costs may have delayed shipments.

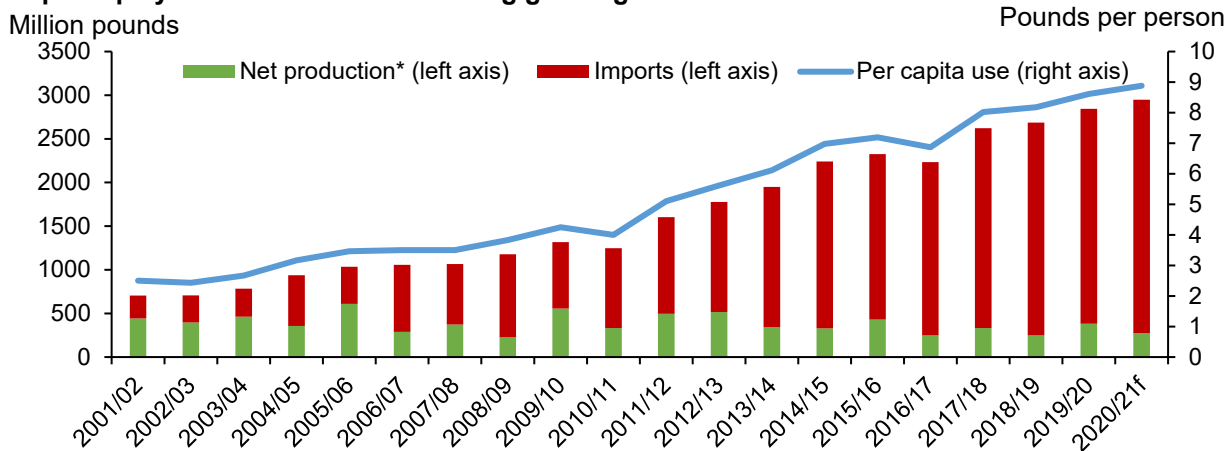
Commodity Feature: Avocados

Jaclyn Kramer and Catharine Weber

Annual avocado per capita availability in the United States nearly tripled since 2001/02–2002/03 and is estimated at over 8 pounds per person from 2018/19–2020/21 (figure SA1). U.S. imports support year-round demand for avocados. In 2018/19–2020/21, imports played a larger role in domestic availability, accounting for 90 percent of domestic supply compared to 40 percent in 2001/02–2002/03. Mexico is the leading global producer of avocados, and the United States is the main destination for Mexico’s avocado exports. In February 2022, there was a 1-week suspension of U.S. avocado imports from Mexico due to safety concerns for USDA, Animal and Plant Health Inspection Service employees, following a threat made to an employee on February 11, 2022. This feature will discuss U.S. avocado production, changes in U.S. imports and seasonal price patterns.

Figure SA1

Imports play a dominant role to meeting growing U.S. demand for avocados



f = forecast.

*Domestic production minus exports.

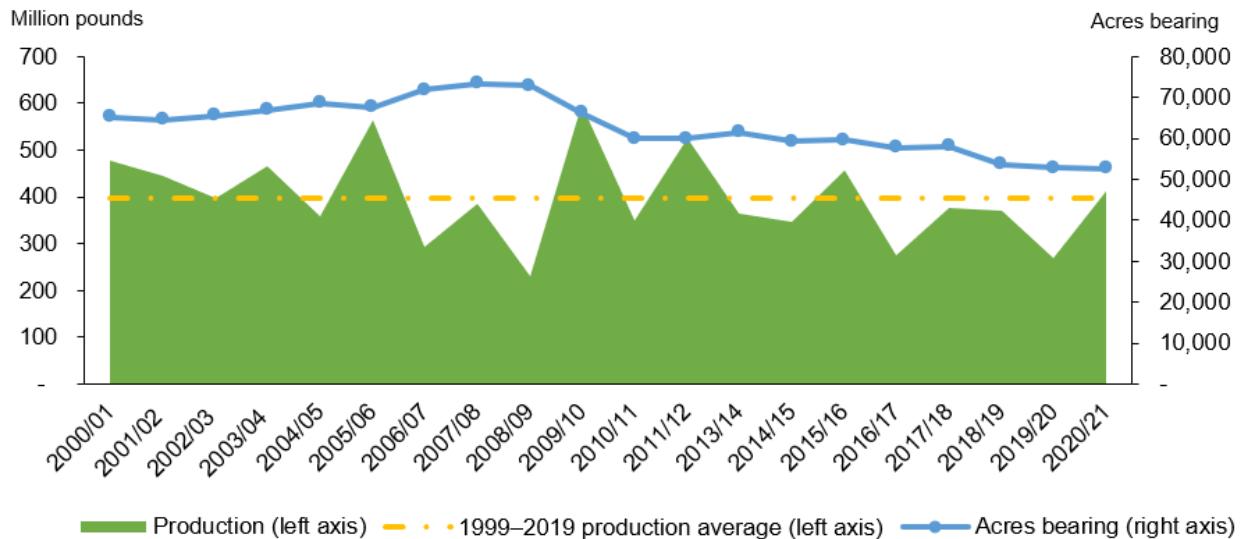
Source: USDA, Economic Research Service.

U.S. production varies year to year due to the alternative bearing cycle of avocado trees, but overall production has been down in the United States since 2011 (figure SA2). California is the top producing U.S. State for avocados. According to National Agricultural Statistics Service (NASS), between 2001 and 2020 California accounted for an average 87 percent of domestic avocado production, followed by Florida (13 percent) and Hawaii (0.3 percent). From 2001 to 2020, total U.S. avocado bearing acres fell by 19 percent as California reduced its acreage by 11,700. Due in part to the decline in acreage, domestic avocado production has trended below

the 20-year average in recent years. California harvests avocados year-round with peak supply from late April through August. Florida's peak avocado shipments occur from July to October.

Figure SA2

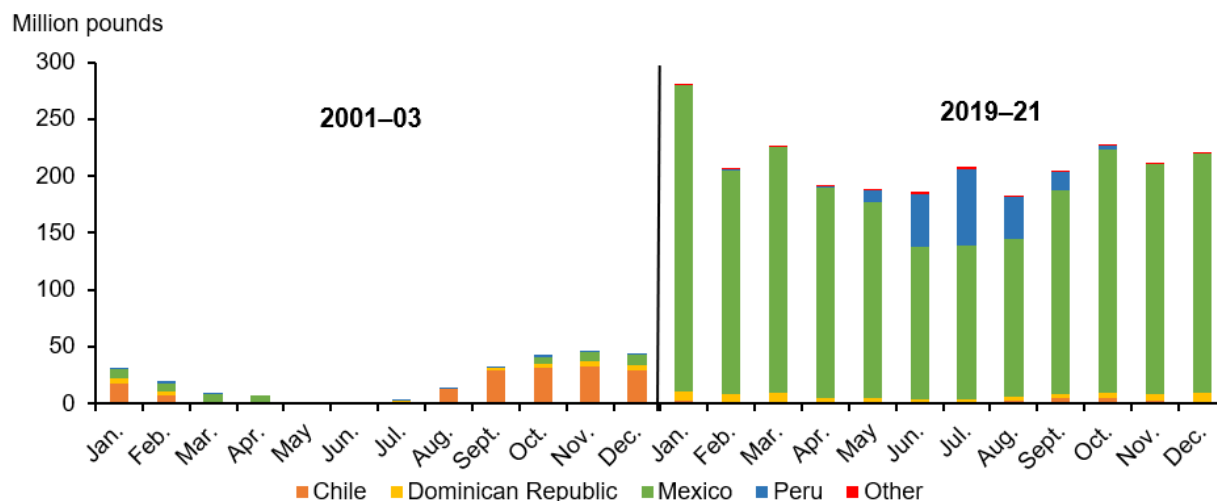
U.S. avocado production and acres slowly decrease since 2011



Note: USDA, National Agricultural Statistics Service did not publish data for the 2012/13 season.
 Source: USDA, Economic Research Service using data from the USDA, National Agricultural Statistics Service.

In 2021, U.S. avocado imports reached a record high of 2.68 billion pounds. In the last two decades, U.S. imports from Mexico soared, accounting for 89 percent of import volume from 2019–2021, followed by Peru (7 percent), the Dominican Republic (3 percent) and Chile (1 percent) (figure SA3). While avocado production has increased around the world, Mexico remains the largest producer of avocados with the Hass variety making up 97 percent of its production volume. U.S. imports of avocados from Mexico rose from an annual average 55 million pounds from 2001–03 to 2.25 billion pounds in 2019–21, overtaking Chile in 2005 as the main supplier of avocado imports to the United States. Mexico ships avocados every month. From 2019–21, 30 percent of avocado import volume from Mexico crossed the border between January and March.

Figure SA3
Mexico captures large share of U.S. avocado imports



Source: USDA, Economic Research Service using data from the U.S. Department of Commerce, Bureau of the Census.

Mexico’s avocado exports have grown likely due to increased demand, area planted and good growing conditions in Michoacán. Michoacán is the main avocado production area in Mexico and for the last 25 years, the only Mexican state allowed to export avocados to the United States. In cooperation with the Government of Mexico, USDA Animal and Plant Health Inspection Service (APHIS) issues phytosanitary certification to export supplies to the United States. APHIS employees regularly inspect packinghouses used to prepare avocados destined for the U.S. border.

In December 2021, the Government of Mexico reached an agreement with U.S. authorities on a working plan to allow imports from Jalisco. According to FAS, the second largest avocado producing state is Jalisco, which borders northern Michoacán. Jalisco produced 10 percent (557.5 million pounds) of Mexican avocado volume in 2020/21, compared to Michoacán’s 77 percent (4,313.9 million pounds). In the 2020/21 season, over half of Jalisco’s 51,694 planted acres were 5 years old or less. Jalisco’s high-density planting and advanced drip irrigated orchards support its export markets: mainly Japan, Canada, France, and Spain. Shipments from Jalisco to the United States are expected to begin in the summer of 2022.

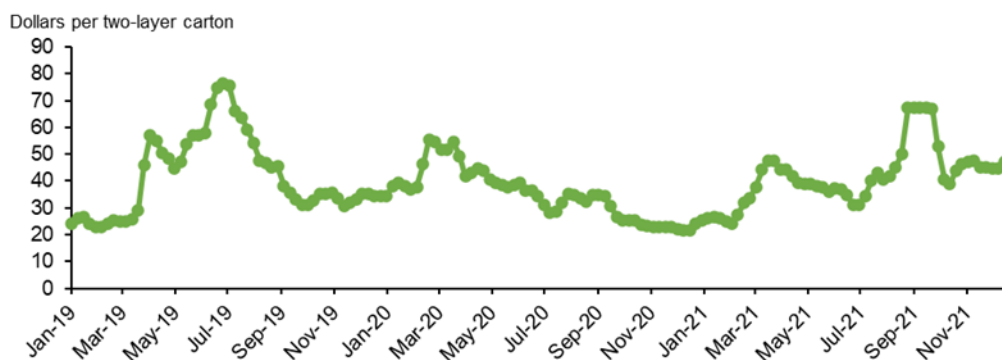
Peru, the second largest avocado supplier to the United States, exported an annual average of roughly 180 million pounds to the United States from 2019–2021. Avocado imports from Peru began in 2011 and the U.S. market share of Peruvian imports grew in a short time to 7 percent in 2019–2021. Europe is the top export destination of Peru’s avocados. Peru’s shipments to the United States peak in June and July when demand is high and shipments from Mexico are down. Due to better market prices in Europe, Peru has increased avocado exports to European

markets (Netherlands, Spain, and the United Kingdom), which accounted for approximately 59 percent of Peru’s avocado export market share in 2020.

Over the last 2 decades, the other top foreign suppliers of avocados to the U.S. market have been the Dominican Republic and Chile. The peak months for U.S. avocado imports from the Dominican Republic are between November and March. In the last decade, the Dominican Republic has maintained a U.S. market share between 2 and 4 percent. U.S. avocado imports from Chile decreased significantly since 2001 as Mexico became the largest supplier and Chile allocated avocado exports to higher priced markets in Europe. U.S. avocado imports from Chile decreased from an annual average of 160 million pounds in 2001–2003 to 14.8 million pounds in 2019–2021, a 91 percent drop. Chile’s avocado season peaks between October and December. The main export market for Chilean avocados is the Netherlands, followed by Argentina, the United Kingdom and the United States from 2019–2021. According to FAS, avocado planted acres in Chile decreased between the 2014 and 2015 season by 20 percent due to removal of orchards in high temperature and lower water availability areas.

Since avocados can mature on the tree for an extended period, U.S. growers look for opportunities to balance fruit quality with market conditions, which is often when there is less price pressure from Mexican imports. California avocado producers benefited from the seasonal supply differences with Michoacán, and higher prices in the spring and summer months. However, unfavorable growing conditions can also spur higher summer prices. As an example, avocado shipping point prices spiked during the summer of 2019 due to a 2018 heatwave in California that decreased yield (figure SA4). In addition, the alternative bearing cycle of avocado production impacts yield and prices year-to-year.

Figure SA4
Median weekly avocado¹ shipping point price patterns



¹Hass variety, two-layer carton package, conventional only, item size 40/48/60, mostly average weekly price.
 Source: USDA, Agricultural Marketing Service, *Market News*, Shipping Point Prices.

With the large increase in per capita consumption, prices have been adequate to support U.S. growers. However, the United States only supplies 10 percent of avocados consumed in the United States and alone cannot meet growing domestic demand. Avocado producers in Chile, Peru, and the Dominican Republic heavily direct their avocado supply toward other markets, where there is less competition. The recent ban of avocados from Mexico sheds light on the importance of Mexico's avocado imports to the United States as well as challenges and opportunities in the U.S. avocado market for domestic and foreign suppliers.

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