



Fruit and Tree Nuts Outlook

Agnes Perez, coordinator
Travis Minor

In this report:

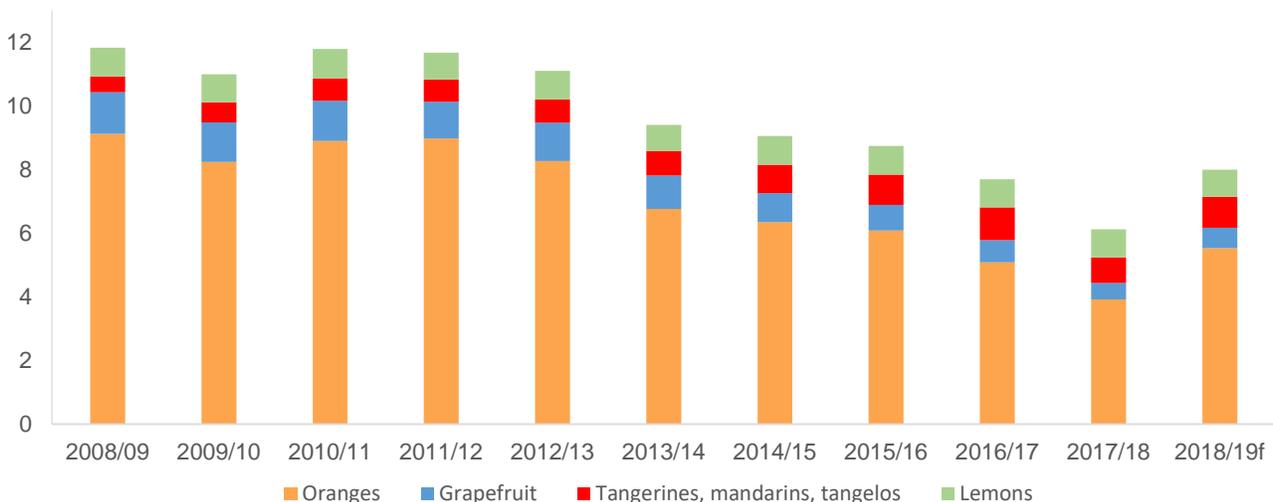
- [Price Outlook](#)
- [Citrus Fruit Outlook](#)
- [Noncitrus Fruit Outlook](#)
- [Melons Outlook](#)
- [Tree Nuts Outlook](#)

Rebounding Supplies in the U.S. Citrus Market

U.S. citrus production in 2018/19 is rebounding from previous-year lows. The U.S. citrus crop is forecast to be up 31 percent to 8.02 million tons in 2018/19, reflecting an expectation for expanded national production in all major citrus commodities, except lemons, and overall larger crops in the four major producing States. The rebound is expected to be the greatest in Florida, recovering from 2017/18 crop losses caused by Hurricane Irma. Nationally, orange and grapefruit crops are expected to have the largest increases from the previous year, with growth of 42 percent and 24 percent, respectively. However, only orange production is projected higher than the 2016/17 season, suggesting a continued long-term decline in the citrus market overall. Increased supplies are lowering fresh citrus prices in the domestic market.

U.S citrus production rebounds from previous drop

Million tons



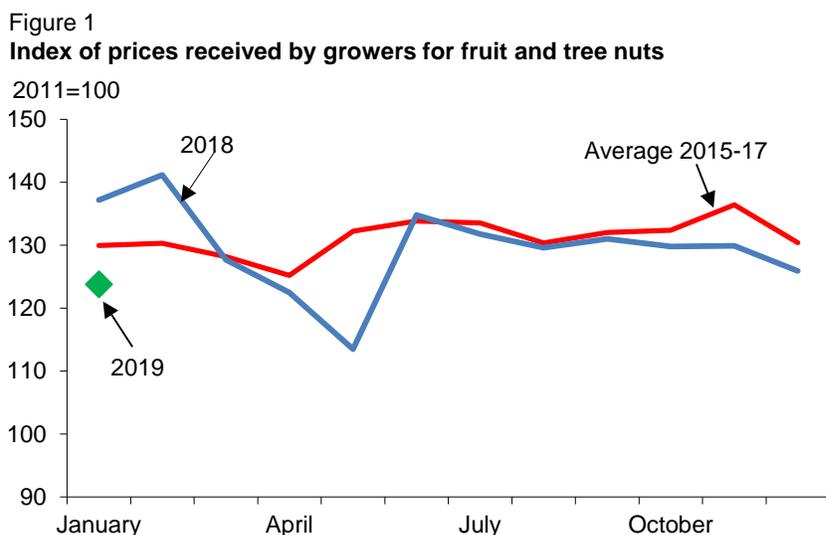
f = forecast

Source: USDA, National Agricultural Statistics Service, *Crop Production*, March 2019 issue, and *Citrus Fruit Summary*, various issues.

Price Outlook

Fruit and Tree Nut Grower Price Index Lower

Fruit grower prices in 2019 began the year weak. At 123.8 (2011=100), the January grower price index for fruit and tree nuts was down from both the January 2018 index of 137.2 and the average January 2015-17 index of 130.0 (fig. 1). Significantly lower grower prices for citrus fruits and fresh pears drove the January index down (table 1).



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

Although U.S. citrus production remains low relative to levels achieved in past decades, rebounding production in 2018/19 across all major producing States is contributing to overall citrus price declines. January 2019 citrus prices declined from average prices in January 2018, when orange, grapefruit, and lemon prices, especially in the fresh market, were at their highest average levels for the month since the 1990s. While average lemon prices were strong earlier this season on reduced domestic production, seasonally increasing supplies from California and imports, as indicated by shipment data from USDA's Agricultural Marketing Service (AMS), are softening recent lemon prices.

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

Commodity	December		January		Year-to-year change	
	2017	2018	2018	2019	December	January
	-----Dollars per box-----				Percent	
Citrus fruit: ¹						
Grapefruit, all	16.13	16.31	15.88	13.83	1.1	-12.9
Grapefruit, fresh	23.17	23.45	23.45	21.84	1.2	-6.9
Lemons, all	30.84	25.44	30.17	21.84	-17.5	-27.6
Lemons, fresh	37.74	31.88	38.68	28.02	-15.5	-27.6
Oranges, all	12.55	10.68	15.06	10.23	-14.9	-32.1
Oranges, fresh	25.13	19.25	25.69	16.17	-23.4	-37.1
Noncitrus fruit:						
Apples, fresh ²	0.397	0.414	0.375	0.415	4.3	10.7
Grapes, fresh ²	0.800	0.570	--	--	--	--
Peaches, fresh ²	--	--	--	--	--	--
Pears, fresh ²	0.444	0.307	0.440	0.287	-30.9	-34.8
Strawberries, fresh	1.820	--	1.690	2.220	--	31.4

-- 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.

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

Ample fresh pear supplies from a larger domestic crop have put downward pressure on grower prices through most of the 2018/19 season (July-June) to date. Although likely to remain below year-earlier levels, pear prices may strengthen seasonally as supplies start to wane in late spring.

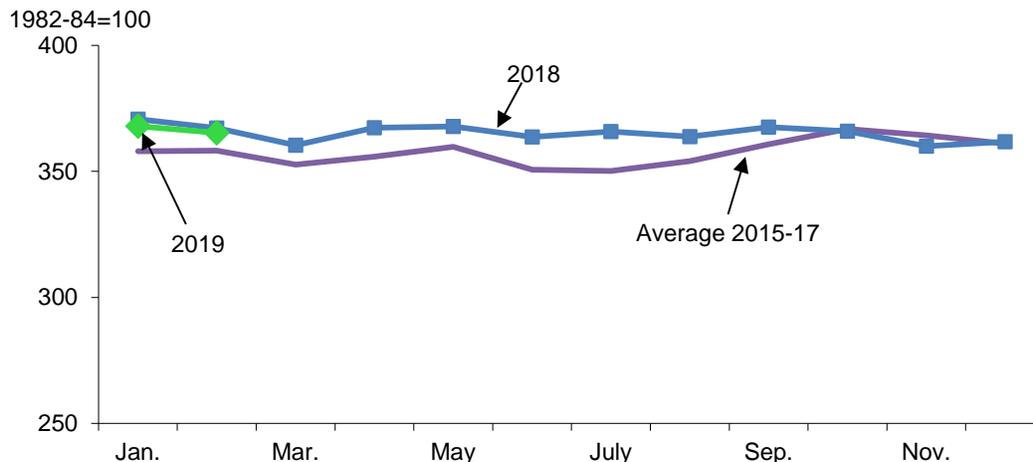
Meanwhile, reduced fresh apple supplies are keeping fresh apple grower prices strong in 2018/19. Prices have been averaging higher than previous-year levels since November 2018. As of March 1, 2019, more than half way through the season, data from the U.S. Apple Association indicate fresh apple holdings (supplies in cold storage) are down 10 percent from the same time a year ago and 5 percent below the 5-year average, likely keeping upward pressure on apple grower prices for the remainder of the season.

Similarly, tight strawberry supplies due to colder-than-normal temperatures and wet weather in major producing States California and Florida kept strawberry prices strong into early 2019. The January 2019 average price for fresh strawberries is the highest January average price since the 1990s. With winter supplies from Florida and Mexico wrapping up for the season, recent heavy rains and cold weather in California will likely continue to dampen supplies, keeping strawberry prices high into early spring.

Consumer Price Index for Fresh Fruit Down

The Consumer Price Index (CPI) for fresh fruit, which has remained below year-ago levels since October 2018, was reported at 365.3 (1982-84=100) in February 2019, down from 367.2 in February 2018 but higher than the 2015-17 average (fig. 2). Based on data from the U.S. Department of Labor, Bureau of Labor Statistics (BLS), consumers paid higher prices for grapefruit, lemons, and strawberries than in February 2018. But lower year-to-year retail prices for navel oranges, bananas, and Thompson seedless grapes drove down the February fresh fruit CPI (table 2). BLS has not reported any prices for Red Delicious apples since November 2017. However, providing an indication of apple retail prices in general, the CPI for apples was nearly steady from year-earlier levels in January and February 2019 (fig. 3).

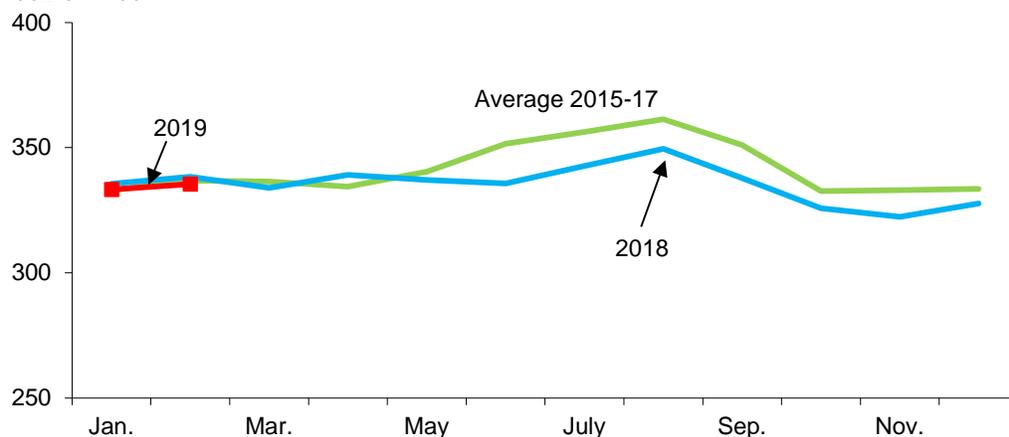
Figure 2
Consumer Price Index for fresh fruit



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

Figure 3
Consumer Price Index for apples

1982-84=100



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

Frigid temperatures this winter likely slowed banana demand in the United States, easing retail banana prices in February despite reduced banana supplies. Meanwhile, increased supplies of California navel oranges and grapes due to larger crops contributed to lower retail prices for these fruit. Grape import supplies (mostly from Chile) early this year have lagged the same time last year, based on AMS shipment data. However, larger end-of-season grape volumes from California pressured prices down. Chile's grape production for 2018/19 is expected to be down slightly on marginally lower bearing acreage, potentially leading to a slight decline in exports, according to USDA's Foreign Agricultural Service (FAS). AMS data show U.S. advertised retail prices for different varieties of table grapes averaged lower than last year in January and February 2019. However, prices in early March have strengthened over last year as California supplies have finished and imports, although rising seasonally, continue below a year ago.

Table 2--U.S. monthly retail prices for selected fruit, 2018-19

Commodity	Unit	2018		2019		2018-19 change	
		January	February	January	February	January	February
		--- Dollars ---		--- Dollars ---		--- Percent ---	
Fresh:							
Navel oranges	Pound	1.326	1.339	1.344	1.298	1.4	-3.1
Grapefruit	Pound	1.251	1.269	1.305	1.315	4.3	3.6
Lemons	Pound	2.045	2.060	2.363	2.270	15.6	10.2
Red Delicious apples	Pound	na	na	na	na	na	na
Bananas	Pound	0.568	0.574	0.576	0.571	1.4	-0.5
Peaches	Pound	--	--	--	--	--	--
Anjou pears	Pound	1.641	1.560	1.634	1.586	-0.4	--
Strawberries ¹	12-oz. pint	2.872	2.492	3.279	2.872	14.2	15.2
Thompson seedless grapes	Pound	3.023	2.900	2.589	2.763	-14.4	-4.7
Processed:							
Orange juice, concentrate ²	16-fl. oz	2.521	2.538	2.407	2.427	-4.5	-4.4
Wine	liter	12.740	12.553	12.008	12.196	-5.7	-2.8

na = Not available.

-- 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

Higher 2018/19 Harvest Anticipated for All Citrus Fruit

The current U.S. citrus crop forecast for 2018/19 is 8.02 million tons, up 31 percent from the 2017/18 final utilized total of 6.13 million tons (table 3). This forecast is 1.5 percent lower than the initial USDA, National Agricultural Statistics Service (NASS) forecast of 8.14 million tons in October 2018. The year-over-year increase reflects improved citrus production across all major citrus-producing States and rising U.S. production for all the major citrus crops, except lemons. Rebounds in Florida's citrus production are largely explained by recovery from Hurricane Irma, which hit during the start of the 2017/18 season. As of the March 2019 NASS *Crop Production* report, domestic all-orange production is forecast at 5.56 million tons in 2018/19, up 42 percent from 2017/18, exhibiting the largest growth of all the citrus fruits. Grapefruit production is also expected to significantly rebound; at 642,000 tons in 2018/19, it is projected to be 24 percent above last season. Production is also expected to rise this season for tangerines, mandarins, and tangelos, up by 20 percent to 965,000 tons, while U.S. lemon production is forecast to decrease 3.6 percent to 856,000 tons.

California Orange Production Up, Breaking Trend

The March issue of the NASS *Crop Production* report forecasts 2018/19 California all-orange production at 1.98 million tons, up 9 percent from 2017/18. This year-to-year increase is slightly improved from what was initially forecast in October 2018. The California navel orange crop is expected to be larger, while the State's Valencia crop is projected level with the previous season. As the navel crop represents a larger share of the market, its expansion is putting downward pressure on fresh orange prices because California supplies a majority of U.S. oranges for fresh use. The California navel crop is estimated at 1.60 million tons, up 11 percent from last season. California Valencia oranges are estimated at 380,000 tons, equal to last season's final utilized production.

Imports of fresh oranges are up so far this season, pushing fresh orange prices in California, November 2018 through January 2019, to an average of \$18.53 per 80-pound box, significantly lower than the same time in 2017/18. Although lower than last season, this price represents a return to normal average prices over the last five seasons (table 4). California navels typically remain in season through early summer, while the Valencia crop and imports have a heavier

market presence in the spring through early summer. The anticipated level Valencia crop will likely continue to keep stabilizing pressure on fresh orange prices in the coming months.

Table 3--Citrus: Utilized production, 2016/17, 2017/18, and forecast for 2018/19¹

Crop and State	Utilized		Forecast for	Utilized		Forecast for
	2016/17	2017/18	2018/19 as of 03-2019	2016/17	2017/18	2018/19 as of 03-2019
	---- 1,000 boxes ² ----			---- 1,000 tons ----		
Oranges:						
Early/midseason and navel:						
California	39,300	35,900	40,000	1,572	1,436	1,600
Florida	33,000	18,950	31,000	1,485	853	1,395
Texas	1,090	1,530	2,000	46	65	85
Total ³	73,390	56,380	73,000	3,103	2,354	3,080
Valencia:						
California	9,000	9,500	9,500	360	380	380
Florida	35,850	26,000	46,000	1,613	1,170	2,070
Texas	280	350	600	12	15	26
Total	45,130	35,850	56,100	1,985	1,565	2,476
All oranges	118,520	92,230	129,100	5,088	3,919	5,556
Grapefruit:						
California	4,400	4,000	4,000	176	160	160
Florida	7,760	3,880	5,400	330	165	230
Texas	4,800	4,800	6,300	192	192	252
All grapefruit	16,960	12,680	15,700	698	517	642
Tangerines, mandarins, and tangelos:						
California	23,800	19,200	23,000	952	768	920
Florida	1,620	750	950	77	36	45
All tangerines, mandarins, and tangelos	25,420	19,950	23,950	1,029	804	965
Lemons:						
Arizona	1,550	1,000	1,400	62	40	56
California	20,500	21,200	20,000	820	848	800
All lemons	22,050	22,200	21,400	882	888	856
All citrus ³	182,950	147,060	190,150	7,697	6,127	8,018

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 (75 prior to the 2010-11 crop year), Florida (FL)-90,

Texas (TX)-85; grapefruit in CA-80 (67 prior to the 2010-11 crop year), FL-85, TX-80; lemons-80 (76 prior to the 2010-11 crop year); tangelos-90; tangerines and mandarins in AZ and CA-80 (75 prior to the 2010-11 crop year), FL-95.

³Totals may not be equivalent to the sum of the categories due to rounding.

Source: USDA, National Agricultural Statistics Service, *Crop Production*, March 2019, and *Citrus Fruits 2018 Summary* (August 2018).

Table 4--Fresh oranges: Average equivalent on-tree prices received by California growers, 2013/14-2018/19

Month	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19
	----- Dollars/box ¹ -----					
November	18.17	20.14	21.20	19.76	28.02	19.96
December	15.97	19.24	19.40	16.96	25.72	19.56
January	21.77	17.84	16.90	15.96	26.22	16.06
February	23.67	16.74	14.30	17.56	26.32	
March	23.41	16.14	13.14	18.45	25.22	
April	23.90	16.60	12.65	18.72	25.12	
May	23.70	16.77	14.15	20.40	26.93	
June	20.74	15.78	14.06	21.62	29.14	
July	18.17	14.24	13.56	24.26	26.72	
August	17.67	16.34	13.30	26.16	26.92	
September	18.27	20.04	14.90	28.86	29.22	
October	15.77	--	13.80	--	24.27	
Nov.-January average	18.64	19.07	19.17	17.56	26.65	18.53

¹80-lb box.Source: USDA, National Agricultural Statistics Service, *Agricultural Prices*, various issues.

Despite improved supply, export volumes thus far are down from the previous year. Season-to-date exports (November and December 2018) are at 54,859 short tons, down 15 percent from the same time last season, but the bulk of U.S. fresh orange exports normally occur in the spring. Data show declines in exports to several major markets in East Asia (down 58 percent to South Korea and 23 percent to Hong Kong, year-to-date) and to Canada (down 3 percent year-to-date), the leading export market for U.S. oranges. USDA's Economic Research Service (ERS) forecasts U.S. orange exports to reach 654,000 short tons in 2018/19, up 16 percent from last season.

For the same 2 months (November and December 2018), fresh orange imports are at 13,420 short tons, 12 percent above the corresponding period last season and 65 percent above the previous 5-year average for those 2 months. Increasing volumes year-over-year suggest a continued long-term trend of expansion. Given the improved fresh orange crop in both California and Florida, ERS forecasts imports to be 209,000 short tons in 2018/19, 15 percent below last season if realized, on reduced import demand from the increased domestic production. Mexico and Chile continue to be the two most important suppliers of fresh oranges for the U.S. market, followed by South Africa. Mexico shipped a 14-percent higher volume of fresh oranges to the United States this season to date, while imports from Chile are currently up 34 percent from the previous season, even though the bulk of its shipments normally take place between June and October.

Florida Orange Crop Recovering From Hurricane Irma

NASS forecasts Florida's 2018/19 all-orange crop at 3.47 million tons, up 71 percent from last season's 2.02 million tons. Recovery from the damage caused by Hurricane Irma was the main contributor to improved production, year-over-year. Due to continued disease pressure, primarily citrus greening, fruit size is projected to remain below average at harvest. Currently, the Valencia orange production forecast is 2.07 million tons, up 77 percent from 2017/18 and 28 percent above the 1.61 million ton 2016/17 harvest. At 1.40 million tons, the non-Valencia crop is projected to grow 64 percent from 2017/18, down only 6 percent from 2016/17. According to NASS, 97 percent of the early midseason rows and 84 percent of the navel rows had been harvested by late February.

The average processing orange price reported in November 2018 was \$7.35 per box, which has kept the 3-month (November-January) average price 16 percent higher than the same period in 2017/18 (table 5). Despite improved supplies, prices averaged higher than year-ago levels in December 2018 and January 2019 on improved product quality.

Table 5--Processing oranges: Average equivalent on-tree prices received by Florida growers, 2013/14-2018/19

Month	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19
----- Dollars per 90-lb box -----						
October	--	--	--	--	--	--
November	7.08	--	--	--	5.10	7.35
December	7.90	7.25	8.25	10.15	7.75	8.35
January	8.20	8.15	8.46	10.25	8.65	9.15
February	8.20	8.56	9.59	10.25	10.48	
March	10.35	10.04	10.55	12.51	11.06	
April	10.75	10.20	10.55	12.95	11.25	
May	10.95	10.30	10.65	12.95	11.75	
June	11.45	10.30	--	--	--	
Oct.-January average	7.73	7.70	8.36	10.20	7.17	8.28

-- = Insufficient data to establish price.

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

With overall Florida orange production improved from last season, ERS forecasts orange juice production in 2018/19 to grow by 75 percent, to 455 million single-strength equivalent (SSE) gallons, from the previous season (table 6). Improved juice yields and the booming crop size will reduce the need for imports. ERS forecasts imports to fall to 454 million gallons, a 22-percent reduction from last season. Year-over-year decreases in import volume have already been reported for the first 3 months of the current marketing season, down 32 percent from the same period last season. Season-to-date shipments are down by 40 percent from

Brazil, the major supplier, and 1 percent from Mexico. Despite lower beginning stocks, the improved orange juice production boosted domestic supplies, which have not yet resulted in growing export volumes. Monthly exports are down 13 percent for the first three months of the season, relative to the same period in 2017/18. Based on early indications and higher domestic production levels, ERS forecasts U.S. orange juice exports in 2018/19 to be up 4 percent from last season. Slightly improved exports and lower imports are not likely to offset the jump in domestic production, driving up orange juice supplies for domestic utilization and ending stocks.

Table 6 --United States: Orange juice supply and utilization, 2008/09 to 2018/19F

Season ¹	Beginning stocks	Production	Imports	Supply	Exports	Domestic consumption	Ending stocks	Per capita availability
-----Million SSE gallons ² -----								Gallons
2008/09	647	1,060	317	2,025	125	1,221	679	3.99
2009/10	679	840	328	1,848	147	1,143	557	3.70
2010/11	557	919	265	1,742	210	1,140	391	3.67
2011/12	391	959	223	1,574	154	971	449	3.10
2012/13	449	847	421	1,717	159	1,024	534	3.25
2013/14	534	663	418	1,615	158	974	483	3.06
2014/15	483	592	460	1,534	113	922	499	2.88
2015/16	499	503	390	1,392	92	880	420	2.73
2016/17	420	422	419	1,261	79	809	374	2.49
2017/18	374	261	581	1,216	48	802	365	2.45
2018/19F	365	455	454	1,273	50	837	386	2.54

F = forecast. ¹Season begins in October of the first year shown as of 1998/99, prior-year season begins in December.

²SSE = single-strength equivalent.

Source: USDA, Economic Research Service.

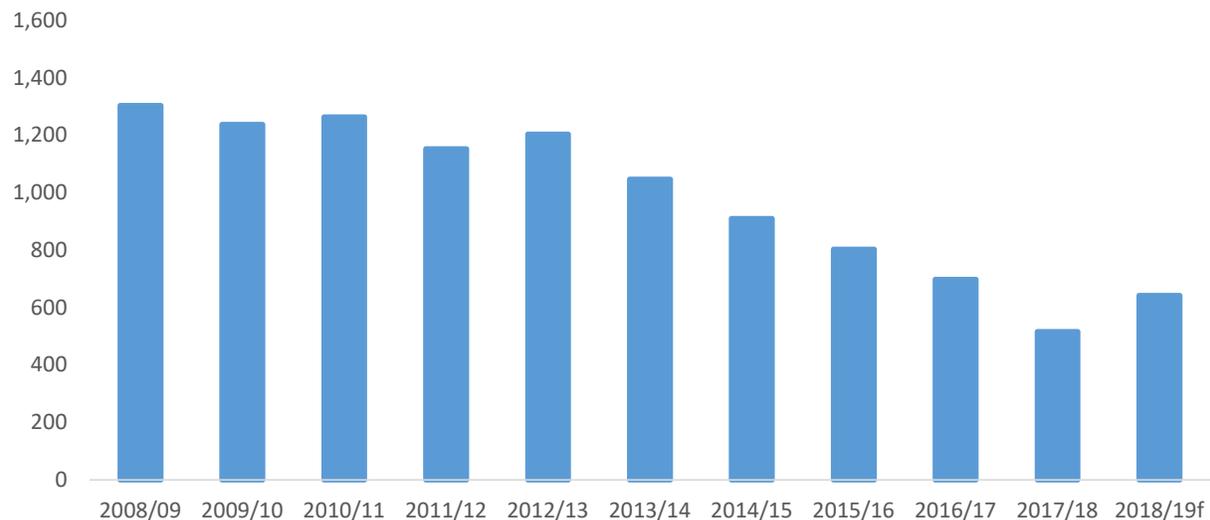
Nielsen retail sales data through February from the Florida Department of Citrus (FDOC) show a continued trend of declining sales volume and overall increased price per gallon. Total orange juice sales volume from October 2018 through mid-February 2019 was down 8.0 percent compared to the previous season, with prices up 3.8 percent. Not-from-concentrate (NFC) orange juice sales constitute nearly two-thirds of total sales volume to date. NFC orange juice sales volume was down 11.7 percent through mid-February, with prices up only 7.5 percent. NFC orange juice prices for the season so far are averaging \$8.24 per gallon, compared to \$7.66 per gallon in 2017/18.

Expected Increase in Grapefruit Production for 2018/19

Total U.S. grapefruit production is projected up 24 percent to 642,000 tons (approximately 1.28 billion pounds) in 2018/19 from 517,000 tons (1.03 billion pounds) in 2017/18 (fig. 4). Production is bolstered by larger crops in both Florida and Texas, while California grapefruit production is expected to remain steady this season.

Figure 4
Total U.S. grapefruit production 2008/09-2018/19

Thousand tons



f = forecast

Source: USDA, National Agricultural Statistics Service, *Crop Production*, March 2019 issue, and *Citrus Fruit Summary*, various issues.

The Row Count Survey conducted by NASS in late February indicated that 59 percent of the red grapefruit rows and 78 percent of the white grapefruit rows were already harvested. AMS reports cumulative movement of grapefruit to markets through early March slowed 22 percent relative to the same period in 2017/18. As a result, fresh grapefruit prices are registering higher than the 5-year average, despite increased imports for the season thus far. The October 2018 to January 2019 average price was \$23.78 per box, only 3 percent below the average price from last season for the same period, which represented a 5-year high (table 7).

U.S. fresh grapefruit import volume for the season, September through December 2018, was down 62 percent compared with the same period in 2017, mostly on lower volumes received from South Africa and Peru. Despite improved domestic production, season-to-date fresh grapefruit exports were down 5 percent, with lower volumes sent to key markets, including Canada, France, and South Korea. At the same time, export volumes improved slightly to Japan and the Netherlands.

Florida grower prices for processing grapefruit are up from last season for the first 4 months of 2018/19 (table 8). Prices in January 2018 averaged \$11.20 per 85-lb box, which is the strongest price observed in the last 5 years for the same month. Seasonal declines in supplies characteristic of the latter half of the season suggest continued price support for the remainder of the season. Season-to-date retail grapefruit juice sales volume is down 13 percent from the

previous season despite improved availability, with juice prices up by 8 percent to \$7.97 per gallon, according to FDOC's February Nielsen sales report.

Table 7--Fresh grapefruit: Average equivalent on-tree prices received by U.S. growers, 2013/14-2018/19

Month	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19
	----- Dollars/box ¹ -----					
October	7.96	15.42	17.54	22.63	26.67	25.78
November	12.63	12.99	16.22	16.33	25.00	24.06
December	12.73	12.49	15.43	16.18	23.17	23.45
January	13.07	10.92	15.01	16.48	23.45	21.84
February	11.73	10.43	14.63	16.76	23.03	
March	11.89	10.34	14.32	18.19	23.08	
April	10.85	9.92	--	20.90	22.46	
May	8.70	--	--	--	--	
Oct.-Jan. average	11.60	12.96	16.05	17.91	24.57	23.78

¹The net weight of a grapefruit box for Florida: 85 lb, for Arizona and California: 80 lb (67 prior to the 2010-11 crop year), for Texas: 80 lb.

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

Table 8--Processing grapefruit: Average equivalent on-tree prices received by Florida growers, 2013/14-2018/19

Month	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19
	----- Dollars/box ¹ -----					
October	--	1.49	4.09	--	5.34	8.83
November	1.63	3.00	4.87	5.76	9.00	9.22
December	2.68	3.32	5.15	6.07	9.85	10.34
January	3.28	3.52	5.55	6.62	9.92	11.20
February	3.51	3.38	5.71	6.76	10.63	
March	3.54	3.59	5.66	7.26	10.22	
April	3.68	3.79	6.03	6.88	--	
May	--	--	--	--	--	
Oct.-Jan. average	2.53	2.83	4.92	6.15	8.53	9.90

¹85-lb box.

-- = Insufficient data to establish price.

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

Forecast Lemon Production Down Slightly in 2018/19

The U.S. lemon crop for the 2018/19 marketing season (August-July) is anticipated to be down 3.6 percent to 856,000 tons from the 2017/18 final utilized production total of 888,000 tons. The overall smaller crop is driven exclusively by a 5.7-percent reduction in California's production. Conversely, the Arizona lemon crop is forecast to grow 40 percent to 56,000 tons.

AMS reported overall slower movement of U.S. lemons this season through early March, down approximately 47 percent. Fresh lemon grower prices for the season through January averaged \$43.99 per box, compared to \$35.21 over the same period in 2017/18 (table 9), on tighter

domestic supplies. Despite very strong imports at the start of the season in August (imports from Chile up 94 percent, August to December 2018), high-quality fruit are commanding strong early season prices. Prices in the early season, August-September of 2018, were the highest observed in the last five seasons. However, seasonally increasing supplies from California, along with increased imports, could temper price increases in the near term.

Table 9--Fresh lemons: Average equivalent on-tree prices received by U.S. growers, 2013/14-2018/19

Month	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19
	----- Dollars per box ¹ -----					
August	31.62	43.81	--	--	--	60.82
September	33.38	44.45	36.16	36.22	32.97	62.20
October	35.17	44.88	39.38	35.98	31.76	44.77
November	32.94	39.86	39.73	33.89	34.95	36.24
December	30.53	34.69	36.00	31.61	37.74	31.88
January	31.71	32.84	33.48	30.97	38.61	28.02
February	30.79	31.24	33.62	31.48	37.11	
March	30.73	30.05	32.40	33.68	31.85	
April	32.92	30.51	32.40	36.58	30.05	
May	35.02	37.81	37.30	38.98	29.95	
June	38.52	45.01	40.00	46.18	32.55	
July	44.22	47.21	37.90	45.78	44.15	
Aug.-Jan. average	32.56	40.09	36.95	33.73	35.21	43.99

¹Beginning in 2010/11, boxes are 80 lb. Prior to 2010/11, box size was 76 lb.

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

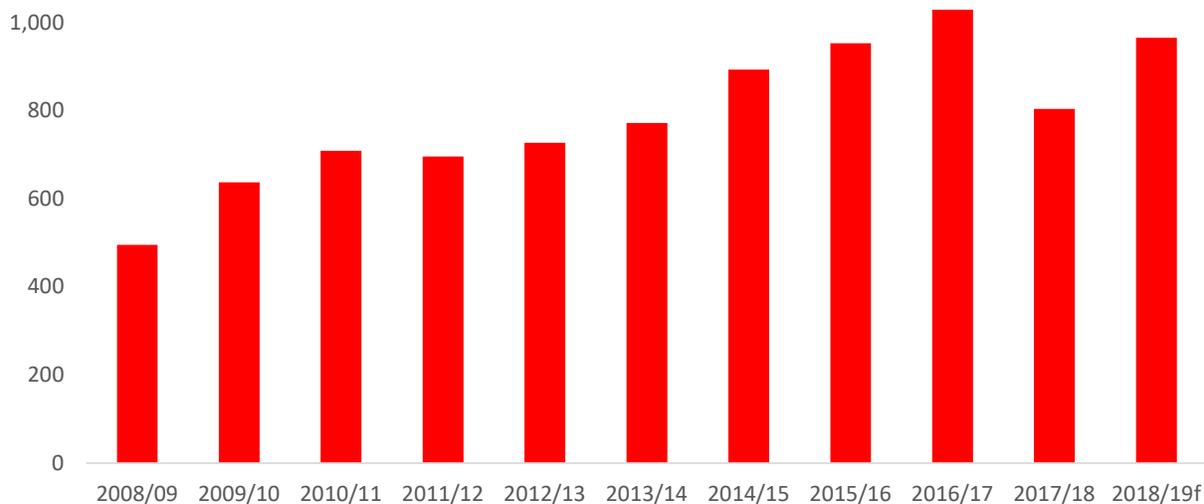
From August through December 2018, imports of fresh lemons were 21 percent above the same period last year, reaching 87,489 tons. This continues the season-to-season growth in U.S. fresh lemon imports that started in 2013. Chile and Mexico continue to be the main suppliers of fresh lemons to the United States, with their combined share of total U.S. lemon imports ranging from 91 to 97 percent in 2012-18. Imports from Argentina, which only recently regained access to the U.S. market, made up only about 4 percent of total volume during the 5-month period. Fresh lemon exports from August through December 2018 were down 18 percent compared to last year, to 32,012 tons, due to lower export volume to major destination markets, Canada, South Korea, and Hong Kong.

Rebounding Tangerine Crop for 2018/19

Total production of U.S. tangerines, mandarins, and tangelos is estimated at 965,000 tons in 2018/19 (October-September), up 20 percent from the previous year if realized (fig. 5). As of the March NASS *Crop Production* report, California's crop is estimated at 920,000 tons, up 20 percent from last season. Similarly, Florida's crop size is estimated at 45,000 tons, a 27-percent

increase year-over-year. AMS reports tangerine and tangelo movement, with only Florida reporting, is down 4 percent this season through early March, likely putting upward pressure on 2018/19 prices. Additionally, lower import volume for the season, down 37 percent November through December 2018, and rising export volume, up 37 percent over the same time period, contributed to a tightening domestic market.

Figure 5
Total U.S. tangerine, mandarin, and tangelo Production 2008/09-2018/19
 Thousand tons



f = forecast
 Source: USDA, National Agricultural Statistics Service, *Crop Production*, March 2019 issue, and *Citrus Fruit Summary*, various issues.

Noncitrus Fruit Outlook

Winter Strawberry Supplies Tight, Prices Strong

Colder-than-normal temperatures and rains slowed the start of the winter strawberry season in the United States, impacting most growing areas and resulting in overall tight supplies and strong early 2019 prices. Fresh strawberry grower prices averaged \$2.22 per pound in January 2019, 31 percent above the January 2018 price and the highest January average price since the 1990s. AMS data show cumulative U.S. strawberry shipments this year through early February were over 20 percent lower than the corresponding volume reported for the same period a year ago. At the same time, import supplies from Mexico lagged slightly. Florida continues to be the main strawberry-producing State during the winter when California's year-round production is at a seasonal low. More than half of U.S. fresh strawberry import supplies arrive from January through March each year, virtually all coming from Mexico.

Florida supplies started to pick up by mid-to-late February, easing prices. Strawberry shipping-point prices in Central Florida in February 2019 ranged from \$12 to \$18 per flat (18 1-pound containers with lids), down from \$19 to \$24 per flat in January 2019, but higher than the \$9 to \$13 per flat in February 2018. At the retail level, strawberry prices also held strong, averaging \$3.28 per 12-ounce pint in January, the highest reported January price since 1990, and \$2.87 in February, up 15 percent from the February 2018 price. With the advent of spring and the beginning of California's peak harvest season, supplies from Florida and Mexico are tapering off. However, recent heavy rains and cold weather affecting California strawberry-growing areas may result in short-term supply gaps, likely putting upward pressure on early spring prices.

California strawberry acreage continues to decline: Based on the annual acreage survey conducted by the California Strawberry Commission, strawberry acreage statewide in 2019 is expected to be down for a second straight year to 31,711 acres, 2,127 acres fewer than 2018. Fall 2018 planted acreage (for winter, spring, and summer production) declined 6 percent from the same period the previous year, with reduced acreage in nearly all major growing districts. Similarly, projected planted acreage this summer, for production during the fall season, is expected to be down 6 percent from last year due to a significant reduction in the Santa Maria growing district, which last year accounted for nearly half of the State's summer acreage. Despite a trending down in acreage devoted to strawberry production, increased plantings of high-performing varieties may help compensate for the smaller acreage to keep or improve the

relatively high production levels achieved over the past decade, barring poor weather conditions.

Fresh supplies up in 2018; frozen supplies also higher: Expanded domestic production due to overall higher yields boosted fresh strawberry supplies in the United States in 2018 despite lower imports. At 2.29 billion pounds, the 2018 fresh market crop was up 7 percent from the previous year on larger overall crops in California and Florida, achieved with the aid of generally favorable weather conditions (and by new varieties for the former and increased harvested acres for the latter). Overall import volume, mostly sourced from Mexico, lagged the previous year by 3 percent.

The boost in overall U.S. supplies led to increased availability of fresh strawberries for the domestic and export markets, driving down the 2018 national average fresh market price to \$106 from \$125 per hundredweight (cwt) in 2017. As a result, export demand continued strong, up 7 percent to a record 310.5 million pounds. Exports were valued at \$427.8 million, also the highest by far. Export volumes to top markets—Canada, Mexico, Japan, and Saudi Arabia—all registered higher in 2018. Each year, slightly over one-tenth of the fresh market crop is destined for exports. In the domestic market, the main outlet for U.S. fresh strawberries, per capita use increased slightly in 2018 to 7.12 pounds, staying within the estimated highs of 7 to 8 pounds annually over the past decade (table 10).

Table 10--Fresh strawberries: Supply and utilization in the United States, 2000 to 2018

Year	Supply			Utilization		
	Utilized production	Imports	Total supply	Exports	Consumption	
					Total	Per capita
	----- Million pounds -----					Pounds
2000	1,433.3	76.2	1,509.5	136.5	1,373.0	4.86
2001	1,259.7	70.7	1,330.4	128.1	1,202.3	4.21
2002	1,406.3	89.9	1,496.2	156.9	1,339.3	4.65
2003	1,642.4	90.3	1,732.7	194.8	1,537.9	5.29
2004	1,694.4	94.4	1,788.8	182.6	1,606.3	5.48
2005	1,811.0	122.7	1,933.7	207.6	1,726.1	5.83
2006	1,910.9	153.4	2,064.3	229.1	1,835.2	6.14
2007	1,973.3	157.7	2,131.0	240.3	1,890.7	6.26
2008	2,091.1	143.0	2,234.1	269.2	1,964.9	6.45
2009	2,288.0	187.2	2,475.2	271.8	2,203.3	7.17
2010	2,319.6	198.3	2,517.9	279.8	2,238.1	7.23
2011	2,332.4	243.5	2,575.9	279.6	2,296.4	7.36
2012	2,455.2	351.3	2,806.5	301.6	2,504.8	7.97
2013	2,508.5	330.6	2,839.1	306.3	2,532.7	8.00
2014	2,454.3	356.0	2,810.3	273.7	2,536.6	7.95
2015	2,437.2	314.4	2,751.6	273.3	2,478.2	7.71
2016	2,302.4	364.5	2,666.9	277.0	2,389.9	7.38
2017	2,137.2	367.2	2,504.4	290.5	2,213.9	6.79
2018 ¹	2,291.9	356.9	2,648.8	310.5	2,338.3	7.12

¹ Preliminary.

Source: USDA, Economic Research Service.

The Processing Strawberry Advisory Board of California reported the 2018 pack estimate for frozen strawberries in the United States at 428.3 million pounds, product-weight equivalent, up slightly from the previous year but below average levels of recent years. Declines in imports and beginning inventories outweighed the small gain from the U.S. pack, limiting overall supplies. Therefore, as domestic demand rose slightly, ending inventories declined nearly 20 percent in 2018 from the previous year (table 11). The export market is still a small outlet for U.S. frozen strawberries, receiving about 5 percent of total available supplies each year. Export volume declined for a second consecutive year in 2018, but the higher domestic prices boosted export value to a record \$50.4 million last year. Increased export volume to Canada were offset by reduced shipments to Japan, South Korea, and Mexico, among the top global markets for U.S. frozen strawberries.

Table 11--Frozen strawberries: Supply and utilization in the United States, 2000 to 2018

Year	Industry pack ²	Imports	Beginning stocks	Total supply	Ending stocks ³	Exports	Consumption	
							Total	Per capita product weight
----- Million pounds-----							Pounds	
2000	439.7	78.0	277.7	795.4	310.5	42.8	442.2	1.57
2001	422.4	76.0	310.5	808.8	243.7	42.9	522.2	1.83
2002	415.9	112.7	243.7	772.2	263.7	45.4	463.1	1.61
2003	429.1	120.1	263.7	812.9	247.2	22.9	542.8	1.87
2004	433.6	125.7	247.2	806.4	293.6	22.0	490.9	1.67
2005	416.5	161.6	293.6	871.7	218.8	22.2	630.7	2.13
2006	458.5	181.5	218.8	858.8	202.5	28.1	628.2	2.10
2007	502.2	182.2	202.5	886.8	280.2	32.0	574.6	1.90
2008	424.9	173.8	280.2	878.9	235.2	35.0	608.6	2.00
2009	482.4	170.3	235.2	887.9	322.5	32.1	533.4	1.74
2010	459.0	188.0	322.5	969.5	263.1	34.3	672.1	2.17
2011	458.3	193.1	263.1	914.6	291.7	45.1	577.7	1.85
2012	497.9	215.6	291.7	1,005.2	303.0	53.5	648.7	2.06
2013	460.0	199.3	303.0	962.3	279.1	62.9	620.3	1.96
2014	465.3	224.2	279.1	968.6	206.8	63.3	698.4	2.19
2015	473.2	298.9	206.8	978.9	235.9	50.3	692.8	2.16
2016	494.0	272.9	235.9	1,002.8	304.8	54.0	644.0	1.99
2017	423.5	241.1	304.8	969.4	281.1	47.1	641.3	1.97
2018 ¹	428.3	224.9	281.1	934.3	227.8	44.9	661.7	2.02

¹Preliminary.

²After 2002, estimates from the Processing Strawberry Advisory Board of California. Previous estimates from the American Frozen Food Institute.

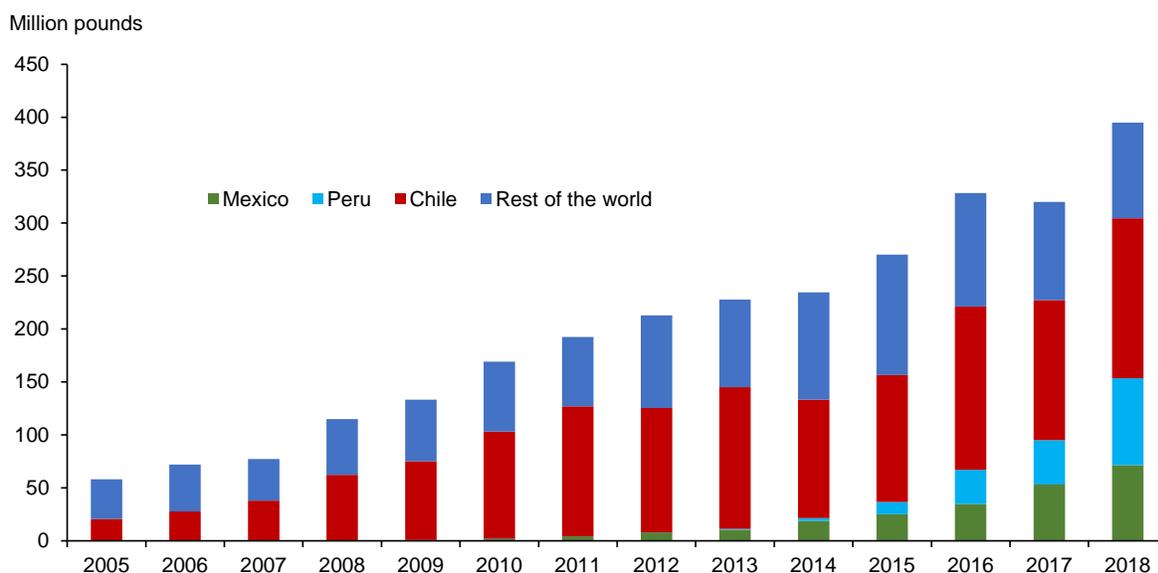
³Stock data from USDA, National Agricultural Statistics Service, *Cold Storage Summary*.

Source: USDA, Economic Research Service.

Early Winter Blueberry Prices Lower Than a Year Ago

U.S. blueberry import supplies started slowly this winter during the off-season for domestic production. Tight supplies from Chile, due in part to a hail-damaged crop, drove overall early 2019 import volumes down from the same time the previous year. Despite lower Chilean supplies, blueberry prices in the United States have been lower than last year, partly influenced by higher imports from Mexico and Peru—global suppliers that have been gaining share of the U.S. blueberry import market in recent years (fig. 6).

Figure 6
Chile continues as leader, but loses share to Mexico and Peru in U.S. fresh blueberry import market



Source: Data from U.S. Department of Commerce, U.S. Census Bureau.

Chile is the main supplier of imported blueberries in the United States, with the bulk of the supplies entering the U.S. market from January through March; imports from Mexico mix with Chilean supplies in the U.S. market but extend throughout the spring, overlapping with early domestic production. Imports from Peru, on the other hand, start in the summer, peak in the fall, and finish during the winter of the following year.

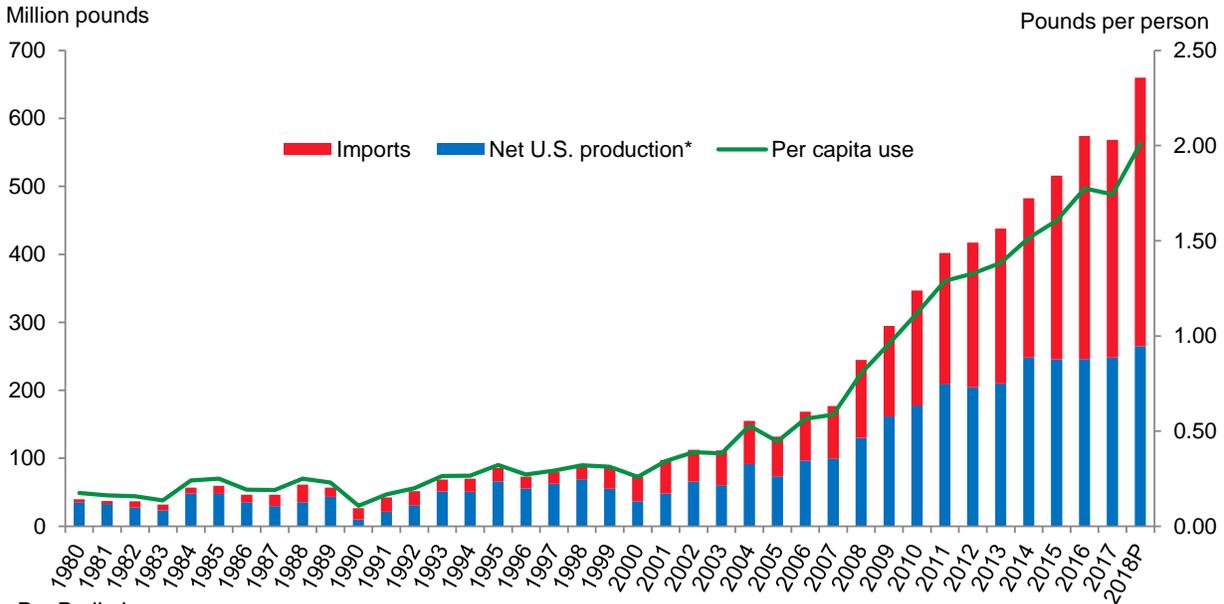
AMS data show Chile's cumulative shipment volume to the United States for the 2019 season through early March was down 23 percent from the same period last year. At the same time, although dwarfed by Chilean supplies, cumulative volumes from Mexico and Peru were up 24 percent and 2 percent, respectively. Despite lower Chilean supplies, free-on-board (f.o.b.), shipping-point prices for Chilean blueberries (at ports of entry in the Miami area and the

Philadelphia area) in January and February 2019 ranged from \$19 to \$22 and \$14 to \$19 per flat (12 (1-pint) cups with lids), respectively, compared with \$22 to \$28 and \$20 to \$22 per flat at the same time last year. F.o.b. prices for Mexican blueberries crossing through Arizona, California, and Texas in January and February also averaged lower (at \$10 to \$14 and \$10 to \$12 per flat (12 (6-ounce) cups with lids per flat), respectively, compared with \$14 to 19 and \$12 to \$15 per flat year-over-year. At the retail level, U.S. advertised prices for blueberries generally mirrored the lower f.o.b. prices to date.

Early domestic blueberries start with the Florida crop, which supplies the market with good volume from April through early May. Harvest for the 2019 season commenced in early March. Although volume was still very light, supplies were running higher than the same time last year. Industry sources indicated a promising crop in Florida with good fruit set as this winter provided sufficient chill hours for the crop. Production then transitions to the Georgia crop, supplying from around late April through June, followed by other major producing States, which come into production during the summer months.

Based on estimates from the North American Blueberry Council (NABC), U.S. production in 2018 increased 6 percent from the previous year, expanding both the fresh market crop and output for processing. The fresh market crop increased nearly 1 percent from the previous year on expanded production in California, Oregon, Washington, and nearly all southern U.S. blueberry-producing States (Florida's production remained flat). For the same period, imports rose to a record 395 million pounds on higher supplies from Chile, Canada, Mexico, and Peru, the United States' leading suppliers of imported blueberries. Exports, on the other hand, declined in 2018 for a second straight year; volume was down to Canada, the biggest export destination for U.S. fresh blueberries, and was mirrored in other major markets such as South Korea, the United Kingdom, and Hong Kong. The growth in domestic production and imports has provided greater year-round availability to support the growing demand for fresh blueberries in the United States, spurred by increased consumer interest in healthy food and proactive marketing efforts by the U.S. blueberry industry (fig. 7). Since 2006, fresh blueberry per capita use has achieved record-breaking levels nearly every year, including 2018 when the 2.0 pounds per person mark was reached.

Figure 7
U.S. fresh blueberry demand increasing



P = Preliminary.

*Domestic production minus exports. For 2018, based on production estimates from the North American Blueberry Council.

Source: USDA, Economic Research Service.

California Avocado Supplies Tight

Early projections from the California Avocado Commission (CAC) indicate statewide avocado production for the 2018/19 marketing season (November-October) dropping to about 175 million pounds (or about 87,500 tons), following higher production a year ago. If realized, California's production will be down significantly from the 2017/18 crop estimate, reported by NASS to be 340 million pounds (or 170,000 tons), and well below the average of the past 5 years. Although winter rains last year benefitted avocado tree health, scorching heat in July 2018, wildfires, recent rains and cold weather, and the general alternate-bearing nature of avocado trees (whereby a large crop one year is followed by a smaller crop the next year) together contributed to the anticipated smaller California crop in 2018/19.

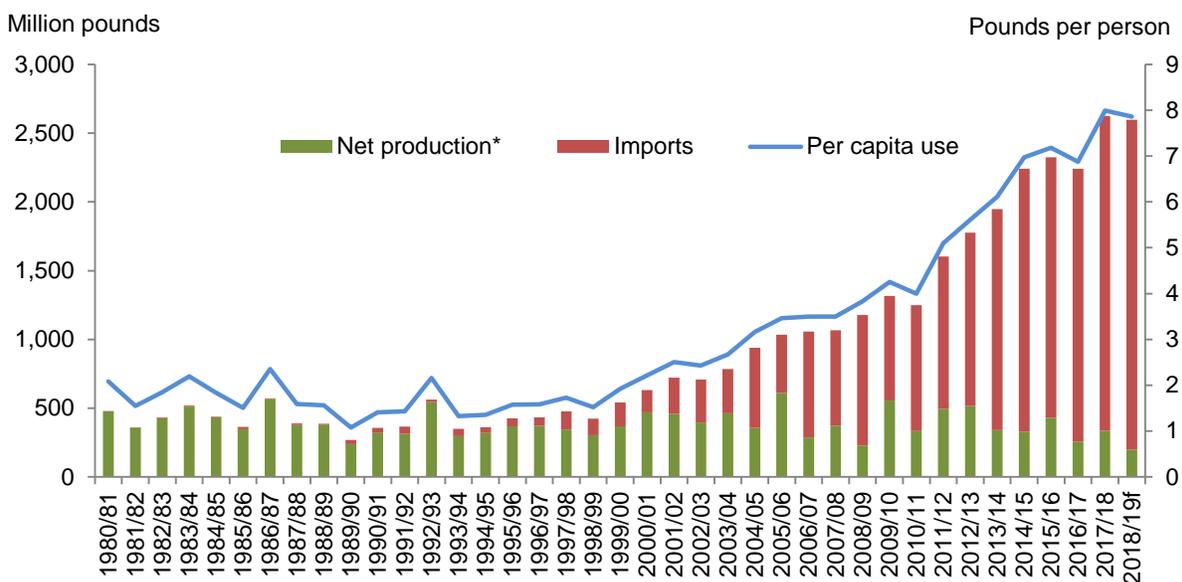
As California produces over 80 percent of all U.S. avocados each year, a potentially smaller domestic crop in 2018/19 signals upward pressure on U.S. avocado grower prices this season. However, a greater import presence may offset supply gaps, tempering domestic prices. U.S. fresh avocado imports have generally continued to grow and have dwarfed domestic production since 2004/05, facilitated by Mexico's year-round access to this market. During the 2017/18 season, imports reached the 2.0 billion pound level for the first time, accounting for 90 percent of domestic fresh avocado availability (fig. 8). Record imports last season coincided with a

significant increase in domestic production (due to a larger crop in California), driving down U.S. avocado grower prices from an average \$2,720 per ton in 2016/17 to \$2,100 per ton in 2017/18.

AMS data show minimal shipment volumes of California avocados this season through early March. Typically, this is a low supply period for the State because harvest mostly occurs from spring to summertime. As avocados can stay longer on the trees, the recent cold and rainy weather and the supply of imported avocados currently available in the domestic market will be some of the factors influencing grower decisions on when best to harvest. At the time this report was written, no prices have been reported yet by AMS for Southern District California hass avocados due to the very small volume available. At the same time, year-to-date volumes from Mexico were running 13 percent higher than the same time last year. As a result, f.o.b. prices of Mexican hass avocados crossing through Texas from January through early March this year averaged \$21 to \$28 per two-layer cartons (size 32s-48s), down from around \$32 to \$40 during the same period last year.

In November 2018, USDA's Foreign Agricultural Service overseas office in Mexico reported that avocado production in Mexico is forecast between 1.9 and 2.0 million metric tons (or 4.2-4.4 billion pounds) in 2018/19, fairly level from the previous year's large crop, aided by ideal weather conditions and phytosanitary pest programs. With abundant supplies, strong international demand, and the weaker peso against the U.S. dollar, exports of Mexican avocados are forecast to continue growing. The United States is Mexico's top export market for avocados, receiving three-quarters of total volume. Tight avocado supplies in California in 2018/19 should boost import demand in the United States, encouraging higher overall exports from global suppliers, especially from Mexico. While the vast majority of imports come from Mexico, other global suppliers are expanding market presence in the U.S. avocado market. Peru currently ranks as the second largest import supplier, accounting for about 10 percent of total import volume, and ships from June through September.

Figure 8
Avocado imports play a dominant role in meeting growing U.S. demand



f = forecast.
 *Domestic production minus exports.
 Source: USDA, Economic Research Service.

Fresh Tropical Fruit Supplies This Winter Below Last Year

This year's early supplies of fresh tropical fruit in the United States are lagging 2018 levels, based on import volumes. AMS shipment data show combined imports of bananas, pineapples, papayas, and mangoes in 2019 through early-March were down 8 percent from the same period a year ago. Among these mainstream tropical fruit, cumulative import supplies were mostly down, except for papayas. Despite reduced supplies, U.S. consumers faced lower advertised prices for most of these fruit during the first 2 months of 2019, signaling sluggish demand, which may have been partially influenced by the colder-than-normal temperatures this winter. Banana shipments accounted for nearly 70 percent of the combined cumulative shipments to date.

Even with lower banana imports, more grocery stores were reported to be running retail promotions in 2019 through early March compared with the same period a year ago in an effort to attract consumer demand. While BLS reported retail prices for bananas in January at \$0.576 per pound, up from \$0.568 per pound in January 2018, average monthly advertised retail prices showed year-to-year declines through early March. Year-to-date banana imports are down 9 percent as reduced volumes from Guatemala, Costa Rica, Mexico, Colombia, and Peru more than offset higher volumes from Ecuador and Honduras.

For the same period, higher import supplies of papayas led to lower advertised retail prices. On a per pound basis, 2019 prices for the Maradol/Tainung varieties averaged \$0.94 in January and \$1.19 in February, compared with \$0.97 and \$1.34, respectively, a year ago. By early March, prices were \$0.77 per pound, down from \$0.84 the same time a year ago. Overall, increased supplies from top supplier Mexico added to significantly higher volumes from Guatemala and Brazil, two other major suppliers, boosting U.S. papaya supplies 32 percent year to date.

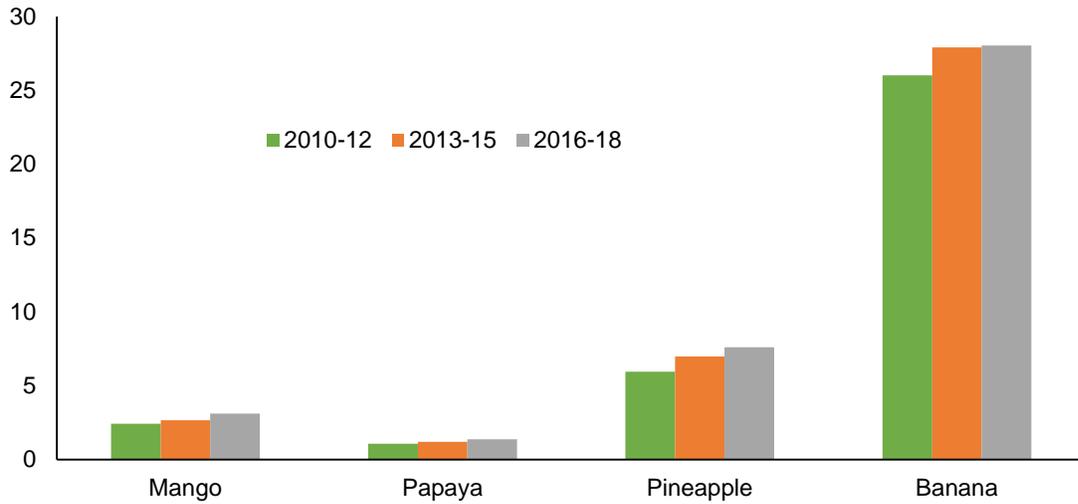
Year-to-date pineapple imports are down 6 percent, mostly on reduced shipments from Costa Rica, which supplies over 80 percent of U.S. fresh pineapple imports annually. At the same time, mango imports are down over 30 percent, reflecting lower shipment volumes from Mexico, Peru, and Ecuador, the top three sources for mangoes in the United States. As with bananas, U.S. consumers paid lower promotional prices for pineapples and mangoes through most of early 2019 relative to the same period in 2018. A majority of the mango shipments to date have been from Peru, but overall yearly volumes originate mostly from Mexico, accounting for nearly two-thirds of total import volume. Mango prices, while below year-ago levels during the first 2 months of 2019, have strengthened from an average \$2.81 per pound in January 2019 to \$3.99 in early March (and up from \$3.18 the same time last year) on dwindling supplies from Peru. As Peruvian supplies finish for the season, imports from Mexico are gaining ground, with heaviest shipments normally in the spring and summer. Early indications from the industry suggest that while supplies from Mexico are likely to remain below year-ago volumes in the next few weeks, rebounding supplies with good-quality Mexican mangoes should provide ample promotable volume for U.S. consumers by mid-spring.

With limited U.S. production, growth in domestic tropical fruit demand continues to be mostly fulfilled by imports. Bananas continue to outrank all other fruit in U.S. fresh import volume and fresh per capita use. Among the above-mentioned tropical fruit, bananas consistently show a distinct lead, with average per capita use estimated at 28 pounds annually in 2016-18, while the estimates for fresh pineapples, mangoes, and papayas average less than 10 pounds for each (fig. 9). Domestic demand continued to grow for all of these fruit over the past decade, generally aided by consumer awareness of healthy nutrition, the rise in imports, and year-round availability. While bananas take the lead in per capita availability, demand for these other mainstream tropical fruit grew more rapidly in the last decade. Between the periods 2010-2012 and 2016-2018, average banana per capita use increased 8 percent, while mango, papaya, and pineapple per capita use each rose 28 percent.

Figure 9

Average banana per capita use in the United States continues to lead other major tropical fruit

Pounds per person



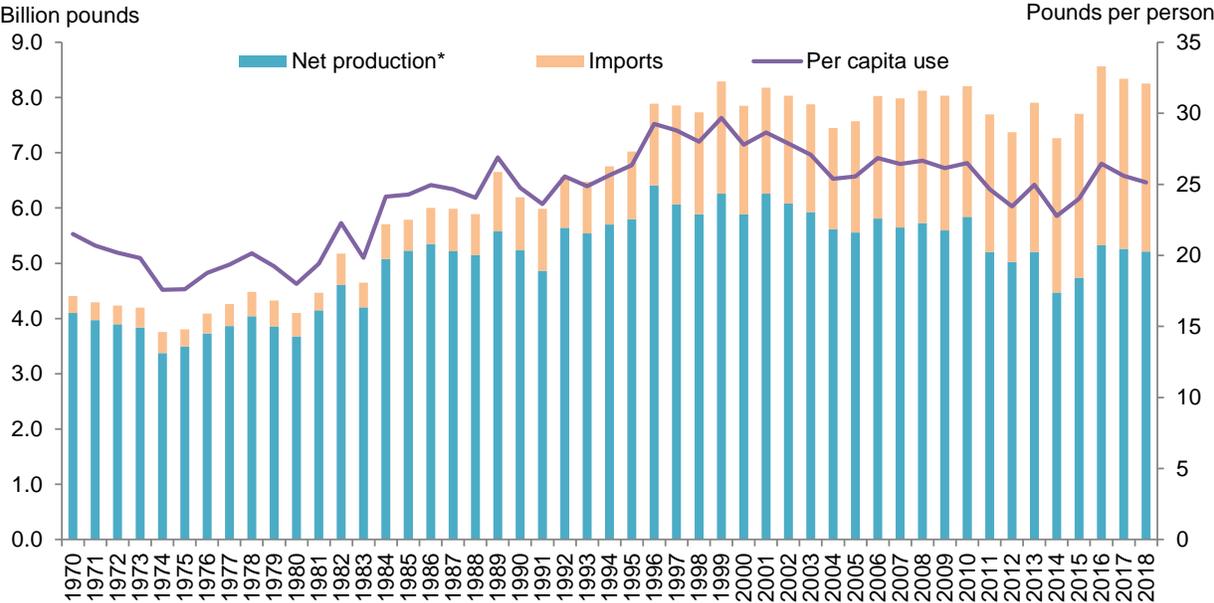
Source: USDA, Economic Research Service calculations.

Melon Outlook

Melon Per Capita Use Down Slightly in 2018

Estimated domestic disappearance (also known as net domestic availability, which is a proxy for consumption) of fresh melons totaled 8.25 billion pounds in 2018, down 1 percent from the previous year. This estimate translates to 25.1 pounds per person, down nearly 2 percent from 25.6 pounds in 2017 and slightly higher than the previous 5-year average (fig. 10). Declines in domestic watermelon and cantaloupe production and overall lower imports reduced total melon supplies in 2018.

Figure 10
All fresh market melons: Per capita use in the United States



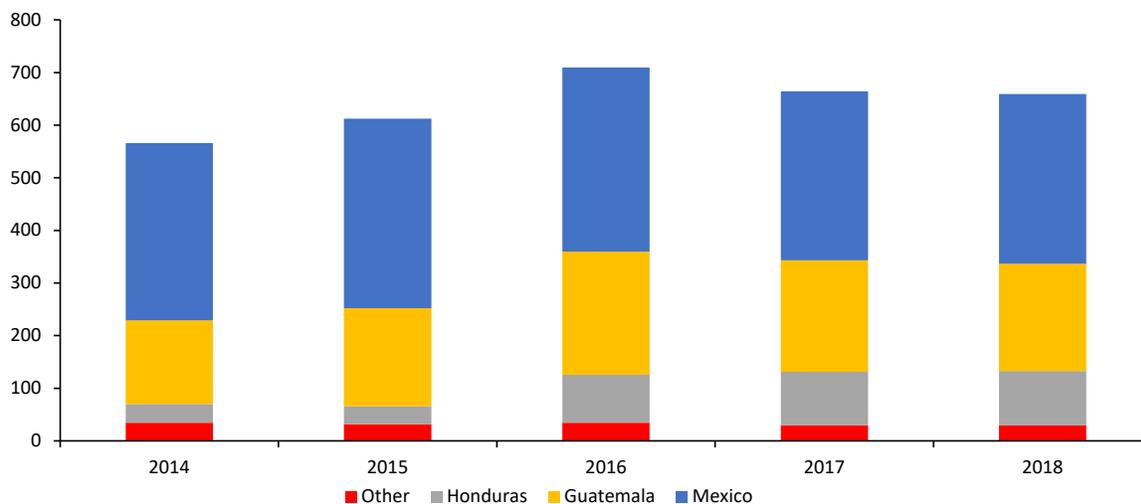
* Domestic production minus exports.
 Source: USDA, Economic Research Service.

The United States remains a net importer of melons, with total melon imports averaging 3.0 billion pounds annually during 2014-2018. Imports have trended higher over the past few decades, gaining share of the U.S. melon market. Globally sourced melons accounted for over one-third of all melons sold in the United States in the last 5 years, up from a 24-percent share during 2000-2004 and less than 10 percent during the 1980s and 1990s. Like domestic production, more than half of the total melon import volume in the United States consists of watermelons; in terms of total import value, watermelons accounted for nearly 50 percent. Mexico, Guatemala, and Honduras are the top three suppliers of U.S. melon imports (fig. 11).

These leading suppliers all ship different types of melons to the United States, but Mexico is the main source for watermelons and Guatemala for cantaloupes. Total melon exports, on the other hand, have remained relatively steady at nearly 600 million pounds annually since 2000; on average, 7 percent of U.S. supplies have been diverted away from the domestic market each year.

Figure 11
Top suppliers of globally sourced melons in the United States

Million dollars



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

Watermelons: While imports in 2018 remained relatively unchanged from the previous year, lower domestic production limited the available supplies for the domestic and export markets. Furthermore, the resulting higher domestic watermelon prices also contributed to overall slowed demand for U.S. watermelons last year. Both total domestic disappearance (total supply minus exports) and per capita use declined 2-3 percent in 2018 from the previous year (table 12). Watermelon exports, totaling 325.4 million pounds and valued at \$78.7 million, were down 4 percent, mostly on lower shipments to Canada, the destination for nearly all U.S. watermelon exports. Exports of watermelon, the predominant melon produced in the United States, account for almost 60 percent of total melon export volume each year.

Domestic watermelon production totaled 3.90 billion pounds in 2018, down 4 percent from the previous year on lower average yield per acre. Production declined in the major producing States of Florida, Georgia, and North and South Carolina, augmented by declines in Delaware and Maryland. Declines were mostly attributed to reduced yields from excessive rainfall during the summer. The late-season crop in Georgia also suffered extensive losses from Hurricane Michael in late summer. These declines outweighed increases in other key producing States

such as Texas, California, and Indiana. Nearly all production is destined for the fresh market, where grower prices averaged \$0.169 per pound in 2018, up from \$0.148 per pound in 2017.

Table 12--U.S. melons: Supply and utilization, by type and all, 2014-2018

Year	Supply			Utilization			Trade shares of:	
	Production ¹	Imports ²	Total	Exports ²	Domestic	Per capita use	Use imported	Supply exported
----- Million pounds -----						--- Pounds ---	----- Percent -----	
Cantaloupe								
2014	1,361.2	902.2	2,263.4	161.5	2,101.9	6.6	42.9	7.1
2015	1,355.2	939.8	2,295.0	122.8	2,172.2	6.8	43.3	5.4
2016	1,512.5	1,041.4	2,554.0	115.3	2,438.6	7.5	42.7	4.5
2017	1,539.2	1,026.3	2,565.5	179.4	2,386.1	7.3	43.0	7.0
2018	1,460.3	992.6	2,452.8	146.2	2,306.6	7.0	43.0	6.0
Honeydew³								
2014	373.9	193.6	567.5	40.6	526.9	1.7	36.7	7.2
2015	376.9	204.6	581.5	38.6	542.9	1.7	37.7	6.6
2016	393.3	262.5	655.8	56.9	598.9	1.9	43.8	8.7
2017	336.4	256.9	593.3	54.9	538.4	1.7	47.7	9.2
2018	461.9	244.9	706.8	58.3	648.6	2.0	37.8	8.2
Watermelon								
2014	3,326.3	1,442.6	4,768.9	338.0	4,430.9	13.9	32.6	7.1
2015	3,547.5	1,555.3	5,102.8	332.2	4,770.7	14.8	32.6	6.5
2016	3,987.8	1,709.6	5,697.4	350.0	5,347.4	16.5	32.0	6.1
2017	4,003.3	1,595.4	5,598.7	340.2	5,258.5	16.1	30.3	6.1
2018	3,868.0	1,595.0	5,463.0	325.4	5,137.6	15.7	31.0	6.0
All melons								
2014	5,061.4	2,793.3	7,854.7	591.8	7,262.9	22.8	38.5	7.5
2015	5,279.6	2,967.2	8,246.8	542.3	7,704.5	24.0	38.5	6.6
2016	5,893.5	3,239.9	9,133.4	570.8	8,562.6	26.5	37.8	6.2
2017	5,878.9	3,076.7	8,955.6	615.9	8,339.7	25.6	36.9	6.9
2018	5,790.2	3,038.5	8,828.7	577.6	8,251.1	25.1	36.8	6.5

¹ Source: USDA, National Agricultural Statistics Service. Production data were estimated by ERS for 1982-91 based on available State data adjusted to the national level. Includes all uses.

² Source: U.S. Dept. of Commerce, U.S. Census Bureau.

³ Honeydews do not have a separate HS code. From 1970-1979, trade was estimated as 50 percent of the category called "other melons." Since 1980, shipment data were used to estimate the distribution of the "other melon" category (ranged from 42-97 percent). From 2001-15, trade was kept at 44 percent of "other melon" because the Mexican market share was not captured by shipment data. Since 2016, shipment data were used to estimate distribution of the "other melon" category (ranged from 54-60 percent).

Source: USDA, Economic Research Service (ERS).

Meanwhile, imports remained fairly flat in 2018, totaling 1.59 billion pounds. Steady import volume from Mexico (source for over 80 percent of U.S. watermelon imports annually), along with increased supplies from Guatemala (second-largest supplier), offset declines from other minor suppliers.

As the 2019 U.S. watermelon season is on track to begin this spring, winter demand has relied mostly on imports. AMS data show continued lower imports in 2019, with the cumulative volume through mid-March down 20 percent from the same time a year ago. Around 82 percent of the import shipments to date were from Mexico; overall volumes were down significantly from the same time last year, but seeded-type volumes registered higher. Year-to-date import volumes from Guatemala were also down, while those from Honduras were up slightly. U.S. advertised

retail prices for seedless watermelons, however, were somewhat mixed on a per fruit basis—higher than year-ago levels for the miniature type in January and February 2018; lower for conventional red flesh. Through mid-March, miniature type seedless watermelon prices averaged \$3.18 each, compared with \$3.06 for the same period last year; while prices for the conventional red flesh seedless type, though higher than the previous month, remained below last year.

Cantaloupe: A 5-percent smaller domestic crop in 2018, along with a decline in imports, left total supplies in the United States down slightly from the previous year at 2.45 billion pounds. Despite slowed exports, domestic disappearance (or domestic availability) in 2018 is estimated down 3 percent from the previous year to 2.3 billion pounds (table 12). With annual population growth at nearly 1 percent, domestic per capita use is estimated at 7.03 pounds in 2018, compared with the estimated 7.32 pounds in 2017. Overall, reduced harvested acres and lower yields drove down national production in 2018. Total crop size was 1.46 billion pounds, the smallest output since 2015. While production increased in a number of producing States in 2018 from the previous year, crop size in California, the dominant producer, declined 12 percent due to a late-season freeze. The crop in Arizona, also a major producer, was up 6 percent and yielded excellent fruit quality.

U.S. fresh cantaloupe import volume in 2018 declined 3 percent from the previous year, mostly because of lower shipments from dominant supplier Guatemala. Imports from Mexico, also among the leading suppliers to the United States, dropped significantly last year. Import value declined from \$240.8 million in 2017 to \$226.8 million in 2018, but still the third highest since 1989. Both export volume and value declined in 2018—down 3 percent to 992.6 million pounds and down 12 percent to \$34.9 million, respectively. Export volumes fell to leading markets Canada (down 21 percent from 2017) and Mexico (down 4 percent), which together accounted for 98 percent of total volume.

Continued slow import shipment volumes from Guatemala through early March, along with lower year-to-date import volumes from Honduras, Costa Rica, and Mexico resulted in higher cantaloupe prices to consumers for much of this winter, based on AMS data. U.S. advertised retail prices for cantaloupes in January and February 2019 averaged 17-26 cents each more than the same time last year. Through mid-March, prices averaged \$2.32 each, compared with \$2.20 each the same time last year.

Honeydew: At 461.9 million pounds, 2018 domestic honeydew melon production (virtually all from California) increased 37 percent from the previous year on significantly larger harvested

acres and improved yields (table 12). Warm summer temperatures provided ideal conditions for crop growth and helped minimize disease pressure. Increased production drove down the average grower price to \$19.6 per hundredweight (cwt), down from \$28.0 per cwt in 2017, more than enough to lower the 2018 crop value by 4 percent to \$90.5 million. Despite lower imports, domestic availability reached the highest level over the past two decades due to the growth in production.

U.S. honeydew melon imports for the 2019 season through mid-March were running more than 20 percent behind volumes of the same time in 2018, based on AMS data. With supplies down considerably, U.S. advertised retail prices averaged \$3.36 each year-to-date, about 10 cents higher than the same period a year ago. Shipment volumes were lower from most all sources, including Mexico, which supplied 50 percent of total import volume to date. Preparations are underway for the 2019 U.S. honeydew melon season, which typically starts in late spring with peak harvest in the summer months.

Tree Nuts Outlook

U.S. Pecan Production Significantly Smaller in 2018/19

In March 2019, NASS reported U.S. pecan production for the 2018/19 marketing season (October-September) at 221.2 million pounds, utilized in-shell basis, down from the October 2018 forecast of 278.9 million pounds and 27 percent below the previous year. Production in 2018/19 is the lowest level in nearly a decade. The small crop reflects declines in all of the eight reported pecan-producing States, with the biggest losses in Georgia and Texas—major pecan producers.

After being the leading producer of U.S. pecans for the past several years, Georgia, with a hurricane-reduced crop, is outranked by New Mexico in 2018/19 (fig. 12). Estimated at only 56.1 million pounds, production in Georgia in 2018/19 is down 48 percent from the previous year and is at the lowest level since 2006/07. This huge decline is attributed mainly to the negative impacts of Hurricane Michael, which affected much of the State's pecan-growing region in October 2018, breaking tree limbs, downing trees, and blowing nuts off the trees. In addition, rains during the summer increased disease pressure and subsequently limited the harvest of nuts blown off trees. Statewide bearing acreage declined from 120,000 acres in 2017 to 110,000 acres in 2018 with relatively low yields (down 43 percent to 510 pounds per acre).

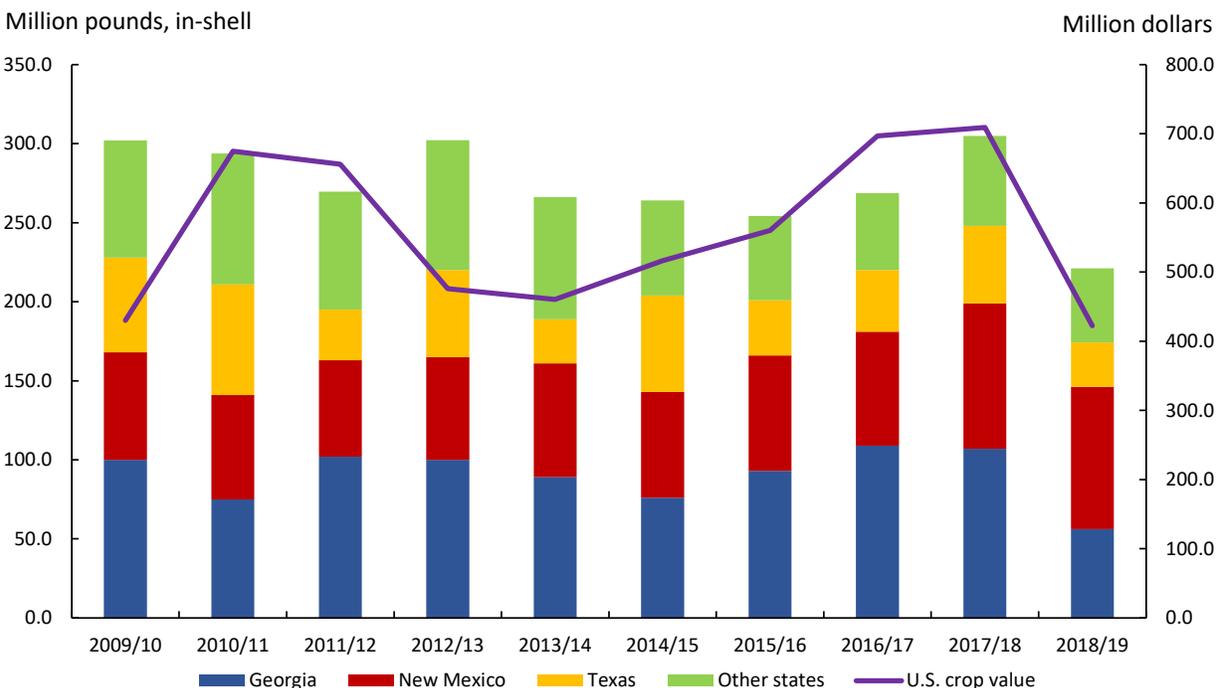
In New Mexico and Texas, 2018/19 production is estimated at 90.1 million pounds (down 2 percent from 2017/18) and 28 million pounds (down 43 percent), respectively. In these States, along with Arizona, Louisiana, and Oklahoma, pecan production is in the “off-year” of the crop's alternate-bearing cycle, which has partly contributed to reduced production.

Despite the overall small crop for this season, the U.S. average grower price for pecans fell from \$2.33 per pound in 2017/18 to \$1.91 per pound in 2018/19. While this could signal some quality issues, large beginning stocks carried over from the previous season also placed downward pressure on prices. Reduced production and overall lower grower prices have driven down the value of production from \$709.2 million in 2017/18 to an estimated \$422.5 million in 2018/19, the lowest crop value since \$406.5 million in 2005/06.

With the smaller domestic crop in 2018/19, import demand is holding firm so far, with significantly higher cumulative import volumes of shelled and in-shell pecans (mostly from Mexico) in October to December 2018 compared with the same period the previous season. Based on NASS cold storage data as of September 30, 2018 (marking the end of the pecan

2017/18 marketing season), 2018/19 beginning stocks were 20 percent above the previous season and the highest since 2008/09, which has helped narrow the gap in overall supplies brought on by the small domestic crop. Meanwhile, a sharp decline in the cumulative volume of in-shell pecan exports during the first 3 months of 2018/19 compared with same period the previous season has outweighed gains in shelled pecan exports, driving down overall exports (both shelled and in-shell) thus far for the season. Among the top foreign markets for U.S. pecans, overall export volumes to date are markedly down to Hong Kong, Vietnam, the Netherlands, the United Kingdom, and China.

Figure 12
U.S. pecan production and crop value down in 2018/19



Source: USDA, National Agricultural Statistics Service, *Pecan Production*, March 2019.

U.S. Pistachio Production Highest By Far

Based on data from the Administrative Committee for Pistachios, the U.S. pistachio crop for the 2018/19 season (September-August) is forecast to increase to a record 994 million pounds (in-shell basis), up sharply from the previous season. Increased bearing acreage and high yields achieved on the “on-year” of the alternate-bearing crop cycle for pistachios are behind this expanded production. There are approximately 14,000 more new productive acres from last year’s total of 250,000 bearing acres, and average per acre yields are up over 50 percent to 3,736 pounds.

Despite low beginning stocks, the surge in domestic production is expected to result in higher-than-average supplies for the domestic and export markets, likely preventing an upswing in pistachio grower prices. The abundant supplies and lower prices should boost overall demand for U.S. pistachios. Furthermore, limited competition from Iran, a major global producer and exporter of pistachios, should benefit market opportunities for U.S. pecans in 2018/19, especially to markets such as China, the European Union, and Canada. The USDA Foreign Agricultural Service forecasts Iran's pistachio production to decline sharply in 2018/19 due to unfavorable weather during bud break, which has resulted in low yields. As with the previous record U.S. crop of nearly 900 million pounds in-shell basis in 2016/17 (or 446.3 million pounds shelled basis), the 2018/19 crop may achieve record-breaking exports and domestic availability, yet, at the same time, finish the season with huge ending stocks (table 13). Import demand will be down.

Table 13--Pistachios: Supply and utilization (shelled basis), 2000/01 to 2018/19¹

Season ²	Utilized production	Loss and exempt ³	Marketable production	Imports	Beginning stocks	Total supply	Ending stocks	Exports	Utilization	
									Domestic	Per capita
----- 1,000 pounds -----										
2000/01	114,164	0	114,164	920	10,462	125,547	33,329	32,641	59,577	0.21
2001/02	80,733	0	80,733	532	33,329	114,594	12,425	44,744	57,426	0.20
2002/03	149,513	0	149,513	764	12,425	162,702	56,180	44,449	62,073	0.21
2003/04	56,217	0	56,217	1,459	56,180	113,857	22,941	35,551	55,365	0.19
2004/05	170,515	0	170,515	798	22,941	194,254	42,317	74,550	77,387	0.26
2005/06	139,003	0	139,003	912	42,317	182,233	56,066	69,332	56,834	0.19
2006/07	119,000	0	119,000	1,388	56,066	176,454	56,629	80,061	39,764	0.13
2007/08	206,998	0	206,998	943	56,629	264,569	67,304	128,494	68,771	0.23
2008/09	135,392	0	135,392	941	67,304	203,637	32,922	139,797	30,918	0.10
2009/10	174,769	0	174,769	1,294	32,922	208,986	21,213	133,177	54,596	0.18
2010/11	250,125	0	250,125	550	21,213	271,887	72,472	145,884	53,531	0.17
2011/12	222,000	0	222,000	920	72,472	295,392	45,331	172,788	77,273	0.25
2012/13	278,255	0	278,255	1,198	45,331	324,784	55,102	185,858	83,824	0.27
2013/14	234,484	0	234,484	542	55,102	290,128	38,471	194,980	56,677	0.18
2014/15	246,332	0	246,332	910	38,471	285,714	79,032	139,538	67,144	0.21
2015/16	134,593	0	134,593	1,151	79,032	214,776	51,133	90,456	73,188	0.23
2016/17	446,299	0	446,299	1,348	51,133	498,780	126,769	231,833	140,178	0.43
2017/18	226,915	0	226,915	1,582	126,769	355,266	39,548	178,922	136,796	0.42
2018/19F	478,763	0	478,763	1,313	39,548	519,624	106,474	265,000	148,150	0.45

F = Forecast.

¹ Conversion factor from in-shell to shelled basis varies year to year for production, stocks, and exports. For imports, the conversion factor is a constant 0.40.

² Season begins in September.

³ Utilized production minus marketable production.

Source: USDA, Economic Research Service calculations.

Suggested Citation

Perez, A. and Minor, T. (2019), *Fruit and Tree Nuts Outlook*, FTS-368, U.S. Department of Agriculture, Economic Research Service, March 29, 2019.

Use of commercial and trade names does not imply approval or constitute endorsement by USDA.

In accordance with Federal civil rights law and U.S. Department of Agriculture (USDA) civil rights regulations and policies, the USDA, its Agencies, offices, and employees, and institutions participating in or administering USDA programs are prohibited from discriminating based on race, color, national origin, religion, sex, gender identity (including gender expression), sexual orientation, disability, age, marital status, family/parental status, income derived from a public assistance program, political beliefs, or reprisal or retaliation for prior civil rights activity, in any program or activity conducted or funded by USDA (not all bases apply to all programs). Remedies and complaint filing deadlines vary by program or incident.

Persons with disabilities who require alternative means of communication for program information (e.g., Braille, large print, audiotape, American Sign Language, etc.) should contact the responsible Agency or USDA's TARGET Center at (202) 720-2600 (voice and TTY) or contact USDA through the Federal Relay Service at (800) 877-8339. Additionally, program information may be made available in languages other than English.

To file a program discrimination complaint, complete the USDA Program Discrimination Complaint Form, AD-3027, found online at [How to File a Program Discrimination Complaint](#) and at any USDA office or write a letter addressed to USDA and provide in the letter all of the information requested in the form. To request a copy of the complaint form, call (866) 632-9992. Submit your completed form or letter to USDA by: (1) mail: U.S. Department of Agriculture, Office of the Assistant Secretary for Civil Rights, 1400 Independence Avenue, SW, Washington, D.C. 20250-9410; (2) fax: (202) 690-7442; or (3) email: program.intake@usda.gov.

USDA is an equal opportunity provider, employer, and lender.

Contacts & Additional Information

Contact		E-mail
Agnes Perez (coordinator)	(202) 694-5255	acperez@ers.usda.gov
Travis Minor	(202) 694-5333	travis.minor@ers.usda.gov

Subscribe to ERS e-mail notification service at <http://www.ers.usda.gov/subscribe-to-ers-e-newsletters.aspx> to receive timely notification of newsletter availability.

Data

Tables from the *Fruit and Tree Nut Yearbook Tables* are available in the Fruit & Tree Nuts Data at <https://www.ers.usda.gov/data-products/fruit-and-tree-nut-data/fruit-and-tree-nut-yearbook-tables/>. They contain the latest data and historical information on the production, use, prices, imports, and exports of fruit and tree nuts.

Related Websites

Fruit and Tree Nuts Outlook

<http://usda.mannlib.cornell.edu/MannUsda/viewDocumentInfo.do?documentID=1378>

Fruit and Tree Nuts Topic Page <https://www.ers.usda.gov/topics/crops/fruit-tree-nuts/>

Vegetables and Pulses Topic Page <http://www.ers.usda.gov/topics/crops/vegetables-pulses/>

Organic Agriculture Topic Page <http://www.ers.usda.gov/topics/natural-resources-environment/organic-agriculture/>

E-mail Notification

Readers of ERS outlook reports have two ways they can receive an e-mail notice about release of reports and associated data.

- Receive timely notification (soon after the report is posted on the web) via USDA's Economics, Statistics and Market Information System (which is housed at Cornell University's Mann Library). Go to <http://usda.mannlib.cornell.edu/MannUsda/aboutEmailService.do> and follow the instructions to receive e-mail notices about ERS, Agricultural Marketing Service, National Agricultural Statistics Service, and World Agricultural Outlook Board products.
- Receive weekly notification (on Friday afternoon) via the ERS website. Go to <http://www.ers.usda.gov/Updates/> and follow the instructions to receive notices about ERS outlook reports, *Amber Waves* magazine, and other reports and data products on specific topics. ERS also offers RSS (really simple syndication) feeds for all ERS products. Go to <http://www.ers.usda.gov/rss/> to get started.

Suggested Citation

Perez, Agnes, *Fruit and Tree Nuts Outlook*, FTS-368, U.S. Department of Agriculture, Economic Research Service, March 29, 2019.

Use of commercial and trade names does not imply approval or constitute endorsement by USDA.

To ensure the quality of its research reports and satisfy government-wide standards, ERS requires that all research reports with substantively new material be reviewed by qualified technical research peers. This technical peer review process, coordinated by ERS' Peer Review Coordinating Council, allows experts who possess the technical background, perspective, and expertise to provide an objective and meaningful assessment of the output's substantive content and clarity of communication during the publication's review.

In accordance with Federal civil rights law and U.S. Department of Agriculture (USDA) civil rights regulations and policies, the USDA, its Agencies, offices, and employees, and institutions participating in or administering USDA programs are prohibited from discriminating based on race, color, national origin, religion, sex, gender identity (including gender expression), sexual orientation, disability, age, marital status, family/parental status, income derived from a public assistance program, political beliefs, or reprisal or retaliation for prior civil rights activity, in any program or activity conducted or funded by USDA (not all bases apply to all programs). Remedies and complaint filing deadlines vary by program or incident.

Persons with disabilities who require alternative means of communication for program information (e.g., Braille, large print, audiotope, American Sign Language, etc.) should contact the responsible Agency or USDA's TARGET Center at (202) 720-2600 (voice and TTY) or contact USDA through the Federal Relay Service at (800) 877-8339. Additionally, program information may be made available in languages other than English.

To file a program discrimination complaint, complete the USDA Program Discrimination Complaint Form, AD-3027, found online at [How to File a Program Discrimination Complaint](#) and at any USDA office or write a letter addressed to USDA and provide in the letter all of the information requested in the form. To request a copy of the complaint form, call (866) 632-9992. Submit your completed form or letter to USDA by: (1) mail: U.S. Department of Agriculture, Office of the Assistant Secretary for Civil Rights, 1400 Independence Avenue, SW, Washington, D.C. 20250-9410; (2) fax: (202) 690-7442; or (3) email: program.intake@usda.gov.

USDA is an equal opportunity provider, employer, and lender.