## Economic Research Service | Situation and Outlook Report

## Fruit and Tree Nuts Outlook

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## U.S. Production of Major Noncitrus Fruit Forecast Mostly Steady to Up in 2019

The 2019/20 marketing year is already underway for many noncitrus fruit crops. Despite variable weather, USDA's National Agricultural Statistics Service (NASS) forecast 2019 production levels for apples, pears, peaches, sweet cherries, and cranberries to be steady to higher than 2018 levels, likely putting downward pressure on 2019/20 grower prices. In contrast, grape and tart cherry crops are expected to be reduced. U.S. tree nut supplies in 2019/20 will also be down from last year's record on forecast smaller crops of almonds, walnuts, and hazelnuts, signaling higher grower prices for these crops. Meanwhile, the 2018/19 U.S. citrus season finished with output gains for all citrus fruit, contributing to lower citrus prices for the season. Early forecast of reduced navel orange production in California will likely support fresh orange prices in 2019/20.

Index of prices received by growers for fruit and tree nuts


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

## Price Outlook

## Fruit and Nut Grower Price Index Remains Weak

Fruit grower prices remained weak through the early part of second-half 2019, indicated by the grower price index for fruit and nuts still being below year-ago levels, similar to the first half of the year. At 122.3 (2011=100), the July 2019 index was down from the July 2018 index of 131.4. Rebounding U.S. citrus production in 2018/19 across all major producing States prompted citrus price declines during the season to date, and along with lower prices for fresh grapes, peaches, and pears, drove the July index down (table 1).

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

| Commodity | June |  | July |  | Year-to-year change |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 2018 | 2019 | 2018 | 2019 | June | July |
|  | -------------------------------Dollars per box ----------------------------- |  |  |  | Percent |  |
| Citrus fruit: ${ }^{1}$ |  |  |  |  |  |  |
| Grapefruit, all | 14.35 | 11.95 | 13.34 | 11.34 | -16.7 | -15.0 |
| Grapefruit, fresh | -- | -- | -- | -- | -- | -- |
| Lemons, all | 29.14 | 19.43 | 40.34 | 22.12 | -33.3 | -45.2 |
| Lemons, fresh | 32.55 | 26.52 | 44.15 | 29.32 | -18.5 | -33.6 |
| Oranges, all | 23.12 | 7.56 | 20.29 | 7.09 | -67.3 | -65.1 |
| Oranges, fresh | 28.70 | 12.35 | 26.32 | 10.82 | -57.0 | -58.9 |
|  |  | ----- | nd ---- | ----- |  |  |
| Noncitrus fruit: |  |  |  |  |  |  |
| Apples, fresh ${ }^{2}$ | 0.286 | 0.380 | 0.311 | 0.388 | 32.9 | 24.8 |
| Grapes, fresh ${ }^{2}$ | 1.275 | 0.810 | 0.800 | 0.700 | -36.5 | -12.5 |
| Peaches, fresh ${ }^{2}$ | 0.565 | 0.590 | 0.570 | 0.545 | 4.4 | -4.4 |
| Pears, fresh ${ }^{2}$ | 0.399 | 0.366 | 0.394 | 0.391 | -8.3 | -0.8 |
| Strawberries, fresh | 0.527 | 0.803 | 0.660 | 0.792 | 52.4 | 20.0 |

-- 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.

Some factors behind the grower price movements for selected fresh-market fruit are as follows:

- Seasonally increasing California grape supplies competed with ample supplies of imported grapes from Mexico, lowering July fresh grape prices. Abundant California supplies likely have continued to ease prices through the summer.
- Increased pear supplies in California softened early-season fresh pear prices, but expected reduced supplies in the U.S. Northwest should boost prices this fall.
- Strong fresh apple grower prices at the end of the 2018/19 season (August-July) bodes favorably to early-2019/20 prices but expectations of a larger crop will likely dampen apple prices this fall when harvest activity peaks.
- The expected bigger 2019 peach crop is driving down fresh peach prices while lower U.S. strawberry shipment volumes are keeping fresh strawberry prices strong.
- Harvest for the 2019/20 California navel crop begins in October. Crop size is forecast to be reduced, likely providing support to fresh orange prices.


## Consumer Price Index for Fresh Fruit Down

The Bureau of Labor Statistics (BLS) Consumer Price Index (CPI) for fresh fruit was reported at 353.4 (1982-84=100) in August, down from 363.8 in August 2018 (table 2). Retail prices for oranges, grapefruit, lemons, peaches, and grapes were lower relative to August 2018 prices. The same factors affecting grower prices continue to be behind the lower retail prices for most of these commodities. While there were no prices reported for Red Delicious apples, the increase in the CPI for apples in August indicate generally higher retail apple prices for the month, partly due to the winding down of import supplies from the Southern Hemisphere. Meanwhile, banana import shipment volumes fell in August, contributing to the higher banana prices for the month.

Table 2--U.S. monthly Consumer Price Index for fresh fruit and retail prices for selected fruit, 2018-19

| Commodity | Unit | 2018 |  | 2019 |  | 2018-19 change |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | July | August | July | August | July | August |
|  |  | ---------------- 1982-84 = 100 ---------------- |  |  |  | --- Percent --- |  |
| Fresh fruit |  | 365.9 | 363.8 | 355.8 | 353.4 | -2.7 | -2.9 |
| Apples |  | 342.6 | 349.6 | 354.7 | 360.0 | 3.5 | 3.0 |
|  |  | --- Dollars --- |  | --- Dollars --- |  | --- Percent --- |  |
| Fresh: |  |  |  |  |  |  |  |
| Navel oranges | Pound | 1.538 | 1.559 | 1.411 | 1.442 | -8.3 | -7.5 |
| Grapefruit | Pound | 1.386 | 1.422 | 1.389 | 1.353 | 0.2 | -4.9 |
| Lemons | Pound | 2.198 | 2.463 | 2.041 | 2.030 | -7.1 | -17.6 |
| Red Delicious apples | Pound | na | na | na | na | na | na |
| Bananas | Pound | 0.575 | 0.569 | 0.569 | 0.578 | -1.0 | 1.6 |
| Peaches | Pound | 2.080 | 2.060 | 2.143 | 1.943 | 3.0 | -5.7 |
| Anjou pears | Pound | 1.662 | -- | 1.552 | -- | -6.6 | -- |
| Strawberries ${ }^{1}$ | 12-oz. pint | 2.007 | 2.004 | 2.111 | 2.010 | 5.2 | 0.3 |
| Thompson seedless grapes | Pound | 2.774 | 2.282 | 2.150 | 2.023 | -22.5 | -11.3 |

na = not available.
-- Insufficient marketing to establish a price.
${ }^{1}$ Dry pint.
Source: U.S. Department of Labor, Bureau of Labor Statistics.

## Noncitrus Fruit Outlook

## Steady to Larger Production for Many Noncitrus Fruit Crops

The 2019/20 marketing year is already underway for many noncitrus fruit crops. Despite variable weather across growing regions, USDA's National Agricultural Statistics Service (NASS) forecast 2019 production levels for some of these crops to be steady to higher than last year's levels, likely putting downward pressure on 2019/20 grower prices. Note: Beginning with 2018 crop year data, NASS has eliminated production and price reporting of commodity-specific noncitrus fruit processed products. In addition, the number of States comprising production estimates of several individual noncitrus fruit commodities has been reduced. Among the noncitrus fruit discussed in this report, States that were eliminated for each commodity account for an average of 6 percent or less of total annual crop size.
U.S. apple crop larger: The 2019 U.S. apple crop is forecast at 10.6 billion pounds, up 4 percent from a year ago as output gains in Western States (largely Washington and California) outweigh declines in Eastern States. The top apple State, Washington, expects a 7.2-billionpound crop of excellent quality, up 7 percent from last year. While this increase signals higher fresh-market supplies, flat to slightly smaller crops in Michigan, New York, and Virginia may hinder gains in processed production (fig. 1). Overall, larger production points to possible

Figure 1
U.S. apple production to increase in 2019/20

Billion pounds


* USDA, Economic Research Service projection

Source: USDA, National Agricultural Statistics Service, Noncitrus Fruit and Nuts Summary, various issues.
weakening of apple grower prices during the 2019/20 season (August-July), likely encouraging increased movement to domestic and export markets, especially in the fresh market. Pricing early in 2019/20, however, may be supported by relatively strong late-2018/19 fresh apple grower prices due to tighter supplies reported by U.S. Apple Association.
U.S. pear crop similar to last year: The 2019 U.S. pear crop is forecast at 1.61 billion pounds (or 805,000 tons). If realized, crop size will be nearly unchanged from a year ago when production finally rose after declining for 4 consecutive years. Bigger crops expected in California (up 15 percent) and Oregon (up 6 percent) will be offset by a 10-percent decline in Washington, mostly due to crop losses from fire blight, hail, and heavy rains (fig. 2). In Oregon, aggressive pruning during the growing season helped increase fruit size, more than compensating for the lower fruit set related to poor pollination. In California, the crop benefitted from ideal pollination weather. Higher California production has kept fresh pear grower prices down early into the 2019/20 season (July to June). Like in the previous season, ample supplies and lower prices continued to boost fresh pear exports, particularly to top market Mexico. As production transitions to the U.S. Northwest this fall, however, tighter supplies in top pear producer Washington may strengthen domestic pear prices and limit export growth.

Figure 2
U.S. pear crop in 2019 relatively unchanged from a year ago

$\mathrm{f}=$ forecast
Source: USDA, National Agricultural Statistics Service, Noncitrus Fruit and Nuts 2018 Summary and Crop Production (August 2019 issue).

Smaller U.S. grape crop but with ample California table grapes: U.S. grape production is forecast at 15.0 billion pounds (or 7.50 million tons) in 2019, down 1 percent from a year ago, reflecting slightly reduced crops in California and Washington, the only two States remaining in

NASS's annual grape enumeration since 2018 (table 3). Even with the smaller overall crop, prospects for ample U.S. fresh grape supplies are good as California's table grape crop is expected to be unchanged from last year's record-large crop. Although delayed harvest due to cold, rainy weather in California slowed early grape shipments for the 2019/20 marketing season (May-April), large supplies of imported grapes from Mexico helped drive down June and July fresh grape grower prices relative to the same period a year ago. Harvest in California is in full swing and overall expected large table grape supplies will likely help temper 2019/20 fresh grape prices. Exports through July have slowed mostly on reduced volumes to top market Canada and many key Asian markets, including Hong Kong, the Philippines, Japan, Singapore, Indonesia, Malaysia, and China.

Table 3--Grapes: Total production and season-average price received by growers in principal States, 2016-17 and indicated 2019 production

| State | Production |  |  |  | Price |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 2016 | 2017 | 2018 | 2019 | 2016 | 2017 | 2018 |
|  | -- Million pounds -- |  |  |  | -- Cents per pound -- |  |  |
| Michigan ${ }^{1}$ | 187 | 127 | na | na | 15.6 | 19.0 | na |
| Missouri ${ }^{1}$ | 11 | 12 | na | na | 46.7 | 35.1 | na |
| New York ${ }^{1}$ | 342 | 374 | na | na | 18.7 | 18.5 | na |
| North Carolina ${ }^{1}$ | 10 | 14 | na | na | 44.8 | 36.7 | na |
| Ohio ${ }^{1}$ | 11 | 9 | na | na | 27.7 | 32.2 | na |
| Oregon ${ }^{1}$ | 134 | 154 | na | na | 107.0 | 111.5 | na |
| Pennsylvania ${ }^{1}$ | 172 | 183 | na | na | 16.2 | 14.1 | na |
| Texas ${ }^{1}$ | 27 | 24 | na | na | 76.5 | 81.0 | na |
| Virginia ${ }^{1}$ | 17 | 18 | na | na | 99.0 | 108.5 | na |
| Washington |  |  |  |  |  |  |  |
| Wine | 540 | 458 | 522 | 520 | 58.0 | 60.5 | 60.5 |
| Juice | 440 | 380 | 410 | 380 | 10.7 | 11.0 | 11.0 |
| All | 980 | 838 | 932 | 900 | 36.8 | 38.1 | 38.7 |
| Total ${ }^{2}$ | 1,890 | 1,754 | 932 | 900 |  |  |  |
| California: |  |  |  |  |  |  |  |
| Wine | 8,064 | 8,032 | 8,570 | 8,400 | 45.3 | 46.4 | 50.5 |
| Table | 2,300 | 2,380 | 2,600 | 2,600 | 67.0 | 66.5 | 48.9 |
| Raisin ${ }^{3}$ | 3,140 | 2,602 | 3,090 | 3,100 | 13.9 | 20.7 | 21.2 |
| All | 13,504 | 13,014 | 14,260 | 14,100 | 41.6 | 45.0 | 43.9 |
| United States | 15,394 | 14,768 | 15,192 | 15,000 | 40.9 | 44.1 | 43.6 |
| na = not available. |  |  |  |  |  |  |  |
| ${ }^{1}$ Estimates discontinued. |  |  |  |  |  |  |  |
| ${ }^{2}$ Sum of State production, excluding California. |  |  |  |  |  |  |  |
| ${ }^{3}$ Fresh weight of raisin-type grapes. |  |  |  |  |  |  |  |
| Source: USDA, National Agricultural Statistics Service, Noncitrus Fruit and Nuts 2018 Summary and Crop Production (August 2019). |  |  |  |  |  |  |  |

Peach production up in top 3 States: Adequate chill hours required for a good fruit set and ample moisture for fruit to size raised production potential for U.S. peaches in 2019. Crop size is forecast at 1.47 billion pounds, up 13 percent the previous year, with production gains in most producing States, including top peach States-California, South Carolina, and Georgia (fig 3).

California's production is forecast up 6 percent to 1.02 billion pounds, reflecting bigger freestone and clingstone peach crops. California's bigger freestone crop, combined with increased production from most other States, suggests greater availability of U.S. fresh-market peaches, likely easing grower prices this summer. Seasonally declining import supplies in the spring, largely from Chile, helped bolster early-season prices. Meanwhile, although the clingstone crop is up, the Canning Cling Peach Association, the cooperative bargaining association in the canning cling peach industry, reported in July the 2019 base price agreement was ratified with processors at $\$ 488$ per ton, unchanged from last year.


Plentiful supplies of U.S. sweet cherries, tart cherry crop down: The 2019 U.S. sweet cherry crop was forecast at 362,000 tons (or 724 million pounds), up 5 percent from a year ago. Ideal spring weather contributed to larger crops in Washington and Oregon, while enough chill hours and rain promoted the crop in California. Marketed mostly for fresh use, the larger sweet cherry crop indicates greater availability for the domestic and export markets, keeping downward pressure on grower prices. Like last season, slowed exports of U.S. fresh cherries have directed exportable supplies instead to the domestic market, adding to the price pressure. High retaliatory tariffs continue to impede export shipments to China, while at the same time export volumes are significantly down to South Korea, another top export market for U.S. cherries. For U.S. tart cherries, mostly used for processing, production is forecast at 290.2 million pounds in 2019, down 18 percent from last year as combined declines in minor-
producing States outweigh the forecast 3-percent gain in Michigan, the leading tart cherry State. Downward price impacts from the overall reduced crop could potentially be minimized by higher-than-average frozen tart cherry beginning stocks and increased imports to date.

Another large U.S. cranberry crop expected: Despite a rainy spring, U.S. cranberry production is forecast to be the second-largest on record in 2019, with slight increases in most producing States, except Oregon. If realized, the anticipated 904-million-pound crop will be up 1 percent from a year ago (fig. 4), reflecting nearly steady to slight increases forecasted for Wisconsin (560 million pounds) and Massachusetts ( 230 million pounds), the top two cranberry States. Under the Federal marketing order, the Cranberry Marketing Committee reports that volume-control measures implemented during the 2018/19 marketing season (SeptemberAugust) and overall increased sales have helped reduce U.S. cranberry inventories through June 2019. Prospects for ample domestic production again this year will likely be offset by lower carryover inventories from last season, tempering likely downward pressure on 2019/20 cranberry grower prices.

Figure 4
U.S. utilized cranberry production and average grower price

$\mathrm{f}=$ forecast
${ }^{1} 1$ barrel = 100 pounds.
Source: USDA, National Agricultural Statistics Service, Noncitrus Fruits and Nuts Summary, various issues and Crop Production (August 2019 issue).

## Citrus Fruit Outlook

## U.S. Citrus Production in 2018/19 Highest in 3 Years

NASS final estimates for the 2018/19 citrus season show U.S. citrus production reached 7.9 million tons, up 31 percent from a historic low in 2017/18 mostly attributed to losses from Hurricane Irma that hit Florida in September 2017 (fig. 5). Citrus production was up across all major citrus commodities and across all major producing States, in agreement with earlier forecasts that production would rebound (table 4).

Total citrus production in Florida increased to 3.5 million tons in 2018/19, up 56 percent from the previous season and nearly matching the 2016/17 pre-Hurricane Irma level. Growers in other citrus-producing States also experienced significant year-over-year increases in production in 2018/19. California citrus production increased to 4.1 million tons, up 15 percent over the 2017/18 season. Although Texas accounts for a small percentage of the total U.S. citrus crop, production in the State continued to increase for the fifth year in a row to 350,000 tons.

Figure 5
U.S. citrus production rebounds from the previous season


Source: USDA, National Agricultural Statistics Service, Citrus Fruits Summary, various issues.

Table 4--Citrus: Utilized production, 2016/17 to $2018 / 19^{1}$

| Crop and State | Utilized |  |  | Utilized |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 2016/17 | 2017/18 | 2018/19 | 2016/17 | 2017/18 | 2018/19 |
| Oranges: | ---- 1,000 boxes ${ }^{2}$---- |  |  | ----1,000 tons ---- |  |  |
| Early/midseason and navel: |  |  |  |  |  |  |
| California | 39,300 | 35,900 | 40,800 | 1,572 | 1,436 | 1,632 |
| Florida ${ }^{3}$ | 33,000 | 18,950 | 30,400 | 1,485 | 853 | 1,368 |
| Texas | 1,090 | 1,530 | 2,210 | 46 | 65 | 94 |
| Total ${ }^{4}$ | 73,390 | 56,380 | 73,410 | 3,103 | 2,354 | 3,094 |
| Valencia: |  |  |  |  |  |  |
| California | 9,000 | 8,300 | 9,000 | 360 | 332 | 360 |
| Florida | 35,850 | 26,100 | 41,350 | 1,613 | 1,175 | 1,861 |
| Texas | 280 | 350 | 290 | 12 | 15 | 12 |
| Total | 45,130 | 34,750 | 50,640 | 1,985 | 1,521 | 2,233 |
| All oranges | 118,520 | 91,130 | 124,050 | 5,088 | 3,875 | 5,327 |
| Grapefruit: |  |  |  |  |  |  |
| California | 4,400 | 3,800 | 3,200 | 176 | 152 | 128 |
| Florida | 7,760 | 3,880 | 4,510 | 330 | 165 | 192 |
| Texas | 4,800 | 4,800 | 6,100 | 192 | 192 | 244 |
| All grapefruit | 16,960 | 12,480 | 13,810 | 698 | 509 | 564 |
| Tangerines and mandarins: |  |  |  |  |  |  |
| California | 23,800 | 19,200 | 26,000 | 952 | 768 | 1,040 |
| Florida ${ }^{4}$ | 1,620 | 750 | 990 | 77 | 36 | 47 |
| All tangerines and mandarins | 25,420 | 19,950 | 26,990 | 1,029 | 804 | 1,087 |
| Lemons: |  |  |  |  |  |  |
| Arizona | 1,550 | 1,000 | 1,350 | 62 | 40 | 54 |
| California | 20,500 | 21,200 | 22,800 | 820 | 848 | 912 |
| All lemons | 22,050 | 22,200 | 24,150 | 882 | 888 | 966 |
| All citrus ${ }^{5}$ | 182,950 | 145,760 | 189,000 | 7,697 | 6,076 | 7,944 |

${ }^{1}$ The crop year begins with bloom of the first year shown and ends with completion of harvest the following year.
${ }^{2}$ Net 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);
tangerines and mandarins in CA-80 (75 prior to the 2010-11 crop year), FL-95.
${ }^{3}$ Includes Temples. Beginning in 2016/17, Temples included in tangerines and mandarins for Florida.
${ }^{4}$ Beginning in 2016/17, tangelos are included in tangerines and mandarins for Florida.
${ }^{5}$ Totals may not be equivalent to the sum of the categories due to rounding.
Source: USDA, National Agricultural Statistics Service, Citrus Fruits 2019 Summary (August 2019).

Despite higher volumes in 2018/19, the total U.S. citrus crop was valued at $\$ 3.4$ billion, up less than 1 percent from the previous season. This relatively minor increase in total value was due to lower citrus grower prices in 2018/19.

Citrus fresh-market crop larger in 2018/19: U.S. citrus production for the fresh market was estimated at 3.5 million tons in 2018/19, up 6 percent from the previous season, with larger fresh-market crops of lemons (up 3 percent) and tangerines and mandarins (up 33 percent). Representing about half of all U.S. citrus for the fresh market, the fresh-market orange crop
remained relatively unchanged from the previous season at 1.65 million tons as output increases in California and Florida were offset by lower production in Texas. A majority of U.S. fresh-market oranges are grown in California, and increased production in the State contributed to lower grower prices. Overall, the average equivalent on-tree price for a box of fresh oranges dropped from $\$ 25.82$ in 2017/18 to $\$ 15.40$ in 2018/19. Despite similar production levels to the previous season, U.S. fresh orange imports in 2018/19 through July were down 17 percent, in volume terms, from the previous season, at the same time fresh orange exports declined 8 percent to date. Exports were down to top foreign markets-South Korea, Canada, Hong Kong, and China. Spain and South Africa continue to gain larger shares of the Korean and Canadian orange markets, the two largest importers of U.S. fresh market oranges.

While Florida grapefruit production has rebounded somewhat in 2018/19, the State's crop size has still not regained the lead position from Texas (table 4). Despite a larger domestic crop, U.S. grapefruit production for the fresh market declined 6 percent in 2018/19 from the previous season as California and Texas supplied lower quantities to this market. The smaller freshmarket crop was met with lack of growth in exports, contributing to lower fresh grapefruit prices in 2018/19.
U.S. growers produced 704,000 tons of lemons for the fresh market in the 2018/19 season, accounting for 73 percent of the overall domestic lemon crop. The U.S. imported an additional 100 million pounds of lemons in 2018/19 for a total of 322 million pounds, up 45 percent from the previous season. Import volumes were up from most supplying nations, including Argentina (up 400 percent from 2017/18). These higher imports, along with increased domestic production and lackluster export demand, prompted lower lemon prices, with the average equivalent ontree price per box falling from $\$ 26.03$ in 2017/18 to $\$ 22.11$ in 2018/19.

A majority of U.S. citrus goes to the processed market: In contrast to the 2017/18 season, the majority of citrus produced in 2018/19 was for the processing market, indicative of Florida production levels rebounding to pre-hurricane levels. Significant increases in Florida's orange and grapefruit crops boosted processing-use production levels in 2018/19, driving down processing prices received by growers. U.S. oranges for processing were estimated at 3.7 million tons in 2018/19, up 66 percent from the previous season, while processing grapefruit production totaled 282,000 tons, up 33 percent. These higher volumes have translated to higher orange juice and grapefruit juice production in 2018/19.

Domestic orange juice production has been on a downward trend since peaking at nearly 1.5 billion single-strength equivalent (SSE) gallons during the 1997/98 season (OctoberSeptember). Orange juice production in 2018/19 (October-November) bounced back from the previous two seasons, with U.S. producers supplying an estimated 458.9 million gallons, up 76 percent from 2017/18 and up 8 percent from 2016/17. As a net importer of orange juice, import volumes for the 2018/19 season through July have slowed, particularly from the largest supplier Brazil, mostly due to increased domestic production.
U.S. grapefruit juice production in 2018/19 (October-September) increased 46 percent from last season to 34.9 million SSE gallons, while imports nearly doubled from the previous season on strong shipment quantities from Mexico, South Africa, and Spain. Grapefruit juice exports reached historic lows for the season to date.

## Citrus Production Next Year Unlikely To Pass 2018/19 Levels

NASS will release initial 2019/20 forecasts for all-citrus production in the United States in October. However, an early forecast pegs navel orange production in California at 76 million 40lb cartons, down 7 percent from the previous year, according to the 2019-20 California Navel Orange Objective Measurement Report released September 12 by the NASS Pacific Regional Office. This forecasted decrease in production is due to a reduction in total navel bearing acreage, lower-than-average yields per tree, and smaller fruit size.

The results of the first orange and grapefruit maturity tests for Florida's 2019/20 season were published by NASS on September 12. Sampled fruit included early oranges, midseason oranges, and red and white seedless grapefruit. Results show that all oranges and grapefruit had higher unfinished juice and solids per box for 2019/20, compared with the same time last season, suggesting a higher saleable juice yield per box in the upcoming season. Moreover, anecdotal evidence suggests that Hurricane Dorian (which touched down in the Bahamas on August 31, 2019) is unlikely to have a direct effect on Florida citrus production in 2019/20.

Citrus greening disease, also known as Huanglongbing (HLB), remains a threat to citrus grove health and productivity across all producing States. Although citrus trees infected with HLB can be found in all major citrus-producing States, the impact of the disease is less pronounced outside of Florida. Total bearing acreage in Florida has decreased nearly 40 percent to 387,100 since the discovery of HLB in 2005. Both California and Texas saw slight increases in citrus
bearing acres in 2018/19. There is no reason to assume production in Florida in 2019/20 will be any better, with further reductions in bearing acreage likely given historic trends.

## Tree Nuts Outlook

## Almond, Walnut, and Hazelnut Production Forecast To Drop

As the 2019/20 domestic season is already underway for most tree nuts, anticipated smaller almond, walnut, and hazelnut crops signal reduced U.S. tree nut supplies. In the previous season (2018/19), record- to near-record production of most U.S. tree nuts, along with overall imports and beginning stocks that are on track with recent trends, have led to overall record supplies and generally lower grower prices (table 5). Only pecan and macadamia nut production declined. The marketable quantity of all U.S. tree nuts, led by almonds, walnuts, and pistachios, was estimated at 3.5 billion pounds (shelled basis) in 2018/19, up 9 percent from the previous season and 4 percent above the 2016/17 previous record.

Almond crop expected to be smaller in 2019/20: Another record-setting domestic crop and fairly large beginning stocks together drove down U.S. almond grower prices in 2018/19 (August-July), boosting overall demand for U.S. almonds (table 5). While exports remained almost steady from the 2017/18 high, ending stocks fell to a recent 5-year low, suggesting fairly robust domestic demand. According to the 2019 California Almond Objective Measurement Report, released by NASS on July 3, a 2.20-billion-pound crop (shelled basis) is forecast for the 2019/20 season, down 4 percent from 2018/19 on lower yields. Bearing acreage continued to rise in 2019 but wet weather during bloom hindered pollination and strong winds damaged some trees and knocked off some nuts, reducing nut set per tree. The forecast smaller crop and lower stocks carried over from last season should put upward pressure on 2019/20 grower prices.

Walnut production forecast to decline in 2019/20: Large beginning stocks and near-record domestic production boosted overall supplies in the United States in 2018/19 (September to August), driving U.S. walnut grower prices to their lowest level since 2009 (table 5, reported on shelled basis). Combined with abundant supplies, the low prices are aiding export and domestic demand for U.S. walnuts and reducing ending stocks. The 2019 California Walnut Objective Measurement Report, released by NASS on August 31, forecast walnut production to decline to 1.26 billion pounds (or 630,000 tons), in-shell basis, down 7 percent from last year on lower average per-acre yield, likely supporting 2019/20 walnut grower prices.

Hazelnut production faces a decline in 2019/20: Following an "on-year" cycle in the alternate bearing tendency of hazelnut trees, Oregon's 2019 hazelnut crop is forecast 4 percent smaller than the 2018 crop. Huge carryover stocks in 2019/20 (July-June) as a result of last season's
record supplies could ease the upward pressure on hazelnut grower prices this season due to the expected smaller crop.

Strong demand for U.S. pistachios in 2018/19: Despite bumper supplies in the United States, overall robust demand for U.S. pistachios in the 2018/19 season (September-August) significantly improved grower prices from lows of the past two seasons. Domestic availability and export volume are on track to finish the season at record levels. Thus far, data from the Administrative Committee for Pistachios back strong domestic shipments in the 2018/19 season through July. For the same period, data from the U.S. Census Bureau show significantly higher exports volumes to date, including Hong Kong, China, and Germany, among the top foreign markets for U.S. pistachios. Despite higher overall shipments, a record-setting domestic crop will likely leave 2018/19 ending stocks at above-average levels. If realized, these large carryover supplies will help alleviate market impacts associated with an anticipated reduced crop in 2019/20 due to the alternate bearing tendency of pistachio trees.

Lower pecan prices in 2018/19 despite small crop: Domestic pecan production in 2018/19 is at its lowest level in nearly a decade. However, record-setting imports and above-average beginning stocks helped steady overall domestic supplies and, along with slowed exports, drove 2018/19 grower prices down from the previous season. The lower prices in 2018/19 drove the crop value down from the record $\$ 709.2$ million in $2017 / 18$ to $\$ 425.3$ million-the lowest since 2009/10. NASS will release the initial U.S. pecan production forecast for the 2019/20 season in its October 2019 Crop Production report.

Smaller macadamia nut crop boosted prices: Hawaii's production declined on reduced acreage and average yields, putting upward pressure on 2018/19 grower prices. The smaller crop and higher prices slowed export volumes to several markets, including Hawaii's top macadamia nut foreign markets-China, Japan, and Canada. Imports, largely from South Africa, Kenya, and Australia, rose to a record high, offsetting the loss in production.

Table 5--Tree nuts: Supply, utilization, and grower price in the United States, by commodity and marketing year, 2014/15-2018/19

| Season ${ }^{1}$ | Utilized production | Lossandexempt ${ }^{2}$ | Marketable production ${ }^{3}$ |  | $\begin{aligned} & \text { Begin- } \\ & \text { ing } \\ & \text { stocks } \end{aligned}$ | Total supply | Ending stocks | Exports | Utilization |  | Seasonaverage grower price |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | Imports |  |  |  |  | Domestic | Per capita |  |
| ---------1,000 pounds (shelled basis) --------- |  |  |  |  |  |  |  |  |  | Pounds | \$/lb |
| Almonds |  |  |  |  |  |  |  |  |  |  |  |
| 2014/15 | 1,870,000 | 58,124 | 1,811,876 | 31,190 | 350,564 | 2,193,629 | 376,614 | 1,269,201 | 547,813 | 1.71 | 4.00 |
| 2015/16 | 1,900,000 | 43,494 | 1,856,506 | 31,776 | 376,614 | 2,264,896 | 412,001 | 1,272,345 | 580,550 | 1.80 | 3.13 |
| 2016/17 | 2,140,000 | 46,984 | 2,093,016 | 26,585 | 412,001 | 2,505,017 | 398,677 | 1,436,305 | 670,035 | 2.07 | 2.39 |
| 2017/18 | 2,270,000 | 54,734 | 2,215,266 | 32,518 | 398,677 | 2,637,443 | 359,013 | 1,534,833 | 743,598 | 2.28 | 2.53 |
| 2018/19 P | 2,280,000 | 55,821 | 2,224,179 | 32,293 | 359,013 | 2,583,193 | 319,173 | 1,524,042 | 739,979 | 2.25 | 2.44 |
| Hazelnuts |  |  |  |  |  |  |  |  |  |  |  |
| 2014/15 | 26,100 | 41 | 26,059 | 10,861 | 4,023 | 40,943 | 1,289 | 16,002 | 23,652 | 0.07 | 1.80 |
| 2015/16 | 23,312 | 551 | 22,761 | 9,224 | 1,289 | 33,274 | 211 | 19,298 | 13,765 | 0.04 | 1.40 |
| 2016/17 | 35,106 | 741 | 34,365 | 11,508 | 211 | 46,084 | 3,106 | 25,372 | 17,605 | 0.05 | 1.35 |
| 2017/18 | 25,600 | 85 | 25,515 | 13,775 | 3,106 | 42,396 | 1,401 | 20,039 | 20,956 | 0.06 | 1.15 |
| 2018/19 P | 40,800 | 261 | 40,539 | 16,764 | 1,401 | 58,704 | 6,524 | 20,622 | 31,557 | 0.10 | 0.90 |
| Pecans |  |  |  |  |  |  |  |  |  |  |  |
| 2014/15 | 128,112 | - | 128,112 | 103,964 | 78,133 | 310,210 | 54,323 | 99,944 | 155,943 | 0.49 | 1.96 |
| 2015/16 | 104,513 | - | 104,513 | 113,712 | 54,323 | 272,548 | 55,633 | 79,731 | 137,184 | 0.43 | 2.20 |
| 2016/17 | 127,935 | - | 127,935 | 132,637 | 55,633 | 316,205 | 69,489 | 103,655 | 143,062 | 0.44 | 2.59 |
| 2017/18 | 141,146 | - | 141,146 | 137,100 | 69,489 | 347,734 | 80,081 | 113,472 | 154,182 | 0.47 | 2.33 |
| 2018/19 P | 104,460 | - | 104,460 | 160,000 | 80,081 | 344,541 | 83,300 | 90,400 | 170,841 | 0.52 | 1.75 |
| Walnuts |  |  |  |  |  |  |  |  |  |  |  |
| 2014/15 | 506,052 | 886 | 505,166 | 21,166 | 34,325 | 560,658 | 73,992 | 355,701 | 130,964 | 0.41 | 1.67 |
| 2015/16 | 526,957 | 870 | 526,087 | 10,782 | 73,992 | 610,861 | 56,571 | 427,263 | 127,026 | 0.39 | 0.84 |
| 2016/17 | 608,431 | 883 | 607,548 | 15,731 | 56,571 | 679,850 | 49,372 | 446,957 | 183,521 | 0.57 | 0.93 |
| 2017/18 | 557,143 | 884 | 556,259 | 12,740 | 49,372 | 618,370 | 56,046 | 399,382 | 162,943 | 0.50 | 1.25 |
| 2018/19 P | 596,725 | 883 | 595,842 | 9,000 | 56,046 | 660,888 | 59,000 | 425,034 | 176,854 | 0.54 | 0.65 |
| Macadamias |  |  |  |  |  |  |  |  |  |  |  |
| 2014/15 |  |  | 20,898 | 21,963 | na | 42,861 | na | 8,594 | 34,267 | 0.11 | 0.87 |
| 2015/16 |  |  | 21,352 | 25,262 | na | 46,615 | na | 10,841 | 35,774 | 0.11 | 0.97 |
| 2016/17 |  |  | 19,081 | 17,478 | na | 36,558 | na | 13,327 | 23,231 | 0.07 | 1.00 |
| 2017/18 |  |  | 22,261 | 21,145 | na | 43,406 | na | 9,978 | 33,428 | 0.10 | 1.10 |
| 2018/19 P |  |  | 16,037 | 28,076 | na | 44,113 | na | 7,281 | 36,832 | 0.11 | 1.19 |
| Pistachios |  |  |  |  |  |  |  |  |  |  |  |
| 2014/15 | 246,332 | - | 246,332 | 910 | 38,471 | 285,714 | 79,032 | 139,538 | 67,144 | 0.21 | 3.57 |
| 2015/16 | 134,593 | - | 134,593 | 1,151 | 79,032 | 214,776 | 51,133 | 90,456 | 73,188 | 0.23 | 3.29 |
| 2016/17 | 446,299 | - | 446,299 | 1,363 | 51,133 | 498,795 | 126,769 | 231,847 | 140,179 | 0.43 | 1.68 |
| 2017/18 | 226,915 | - | 226,915 | 1,585 | 126,769 | 355,269 | 39,548 | 178,953 | 136,768 | 0.42 | 1.69 |
| 2018/19 P | 487,457 | - | 487,457 | 1,400 | 39,548 | 528,405 | 80,000 | 295,000 | 153,405 | 0.47 | 2.65 |
| Other nuts |  |  |  |  |  |  |  |  |  |  |  |
| 2014/15 | - | - | - | 476,875 | - | 476,875 | - | 136,183 | 340,693 | 1.07 | - |
| 2015/16 | - | - | - | 476,174 | - | 476,174 | - | 135,298 | 340,877 | 1.06 | - |
| 2016/17 | - | - | - | 491,929 | - | 491,929 | - | 124,291 | 367,638 | 1.13 | - |
| 2017/18 | - | - | - | 519,977 | - | 519,977 | - | 138,589 | 381,388 | 1.17 | - |
| 2018/19 P | - | - | - | 473,197 | - | 473,197 | - | 117,309 | 355,889 | 1.08 | - |
| Total |  |  |  |  |  |  |  |  |  |  |  |
| 2014/15 | 2,797,494 | 59,052 | 2,738,442 | 666,931 | 505,516 | 3,910,890 | 585,250 | 2,025,163 | 1,300,476 | 4.07 | - |
| 2015/16 | 2,710,727 | 44,915 | 2,665,812 | 668,081 | 585,250 | 3,919,144 | 575,549 | 2,035,232 | 1,308,364 | 4.06 | - |
| 2016/17 | 3,376,852 | 48,609 | 3,328,244 | 697,232 | 575,549 | 4,601,024 | 647,413 | 2,381,753 | 1,571,858 | 4.85 | - |
| 2017/18 | 3,243,064 | 55,704 | 3,187,361 | 738,839 | 647,413 | 4,573,613 | 536,089 | 2,395,245 | 1,642,279 | 5.03 | - |
| 2018/19 P | 3,525,479 | 56,964 | 3,468,514 | 720,730 | 536,089 | 4,725,333 | 547,997 | 2,479,688 | 1,697,648 | 5.17 | - |

$\mathrm{P}=$ Preliminary. ${ }^{1}$ Season begins in July for hazelnuts, macadamias, and other tree nuts (includes Brazil, pignolias, chestnuts, cashews, and mixed nuts); August for almonds; September for pistachios and walnuts, and October for pecans. ${ }^{2}$ Utilized production minus marketable production, which includes inedibles and noncommercial usage. ${ }^{3}$ Marketable production is used to calculate consumption.
Source: USDA, Economic Research Service calculations.

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