## Contents

Price Outlook
Fruit Outlook
Tree Nuts Outlook
Fruit and Nut
Trade Outlook
Commodity
Highlight:
Cranberries
Contacts \& Links:
Select yearbook tables

## Tables

Retail prices
Grower prices
Selected fruit and nuts tables
Fruit and nut trade

## Briefing Rooms

Fruit \& Tree Nuts

The next release is Jan. 31, 2002

Approved by the World Agricultural Outlook Board.

# Fruit and Tree Nuts Outlook 

Susan Pollack and Agnes Perez

Larger Citrus Crop Forecast

The index of grower prices for fruit and nuts was higher for September and October 2001 from the same period a year ago. Prices were higher for all citrus fruit and fresh pears. Fresh apple and peach prices declined in September from a year ago. Apple prices picked up in October. The forecast for a smaller apple crop this season contributed to the price increase. Retail prices were lower this September for Valencia oranges, lemons, and Red Delicious apples over September 2000. Fresh strawberry and Thompson seedless grape prices, however, were up this September from August, as they usually are as their seasons wind down.

The first estimates for the 2001/02 citrus crop, released October 12, is projecting an increase of 2 percent over last year but a decline of 3 percent from 2 years ago. This year, more oranges, grapefruit, and tangerines should be available for harvesting, but fewer lemons. The crop estimate is likely to change as the season progresses and weather factors affect the condition and size of the fruit. Florida's crop is projected to increase 4 percent over last season and accounts for almost all the expected increase in the citrus crop. California's and Arizona's citrus crops are forecast to be 6-percent smaller than last season and 8-percent smaller than two seasons ago.

The pecan crop for 2001 is projected to total 355.3 million pounds (in-shell basis), 69 percent bigger than last year. Due to the alternate-bearing nature of nut trees, this year's crop is on an "on" cycle of production. As a result of the larger crop and bigger supplies coming into this year, grower prices are likely to be down in 2001.

Citrus exports are likely to be up in 2001/02, with sufficient supplies and good quality fruit. Larger sizes for this season's fresh oranges and grapefruit are a plus for exporters because consumers in the major Asian markets have a preference for larger fruit. Mexican avocado imports should increase this year as a result of a smaller California crop and the expansion of the time period Mexican avocados can enter the United States and the number of States in which they are permitted to be sold. Pecan exports should increase from last year due to the larger crop.

## Price Outlook

## Grower Prices Up During Early Fall

The index of grower prices was higher for September and October 2001 from the same period a year ago (fig. 1). The dramatic percent increase in the orange prices this season reflects the very low prices growers received last year (table 1). This season's prices, while still lower than the average for September and October, are an improvement over last year. The smaller and highquality fresh orange crop should boost grower returns, especially for navel orange growers. The demand for late-season fresh Valencia oranges appears to be diminishing in favor of other fruit and imported navels from Southern Hemisphere countries. As a result, grower prices for the Valencia variety may not improve this year as much as might be expected for navels.

The bigger crop of Florida oranges this season is likely to drive down grower prices for processing oranges. If demand remains weak in the foodservice industry, because consumers are eating out less this year since the September incident, it could lower demand for orange juice and further drive down grower prices.

Figure 1
Index of prices received by growers for fruit and nuts


Source: National Agricultural Statistics Service, USDA.
Grapefruit prices were up this September and October over last year as last season's crop is winding down. Harvesting of the 2001/02 grapefruit crop would have just begun and the quantity of this season's fruit in the marketplace would be minimal. The Florida industry is limiting what it sells at this time of year based on fruit size and the sugar-to-acid ratio. The idea is to prevent an abundance of tart grapefruit from being

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


[^0]marketed and turning off consumers to this year's crop. As harvesting does get underway, growers may have a difficult time getting higher prices this year for fresh grapefruit because of the bigger crop. Lackluster demand for grapefruit in the United States has been plaguing grapefruit growers over the past several seasons. The industry is becoming increasingly dependent on export markets to move its crop. With exports projected to increase this season, higher international demand may offset sluggish domestic demand and result in higher prices. Low juice stocks entering this season may help increase processing grapefruit prices. With growers receiving very low prices for their processing grapefruit, higher prices will be a welcome relief.

Fresh apple and peach prices declined in September from a year ago. As the new apple crop began dominating the market, along with the loss of most summer fruit, apple prices picked up again in October. The expected smaller apple crop for the coming year helped push prices in October above a year ago. Grower prices fell in October for fresh grapes and strawberries from a year ago.

Retail prices are lower this September for Valencia oranges, lemons, and Red Delicious apples over September 2000 (table 2). Sluggish demand for Valencia oranges and strong competition from other apple varieties weakened prices for the Valencias

Figure 2
Consumer Price Index for fresh fruit 1982-84=100


Source: Bureau of Labor Statistics, U.S.Department of Labor.
and Red Delicious. The early lemons from California were small during September and imported lemons were still in the market, bringing prices below a year ago.

Fresh strawberry and Thompson seedless grape prices were up this September from August as they usually are as their seasons wind down.
California's production of both table grapes and strawberries is declining and grape supplies will soon start arriving from Chile. Chilean exports are expected to be slightly smaller than last year, which should result in higher prices at the retail market this winter.

Table 2--U.S. monthly retail prices, selected fruit, 2000-2001

|  |  |  | 00 |  |  | 2000 | 1 Change |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Commodity | Unit | August | September | August | September | August | September |
|  |  |  | --- Dollars --- |  | Dollars --- |  | rcent --- |
| Fresh: |  |  |  |  |  |  |  |
| Valencia oranges | Lb | 0.639 | 0.574 | 0.516 | 0.522 | -19.2 | -9.1 |
| Navel oranges | Lb | - | -- | - | -- | -- | -- |
| Grapefruit | Lb | 0.672 | 0.704 | 0.753 | 0.759 | 12.1 | 7.8 |
| Lemons | Lb | 1.375 | 1.357 | 1.275 | 1.352 | -7.3 | -0.4 |
| Red Delicious apples | Lb | 0.928 | 0.922 | 0.898 | 0.874 | -3.2 | -5.2 |
| Bananas | Lb | 0.490 | 0.488 | 0.519 | 0.508 | 5.9 | 4.1 |
| Peaches | Lb | 1.282 | -- | 1.204 | 1.349 | -6.1 | -- |
| Anjou pears | Lb | - | -- | - | - | -- | -- |
| Strawberries 1/ | 12-oz pint | 1.263 | 1.416 | 1.628 | 1.916 | 28.9 | 35.3 |
| Thompson seedless grapes | Lb | 1.283 | 1.329 | 1.472 | 1.544 | 14.7 | 16.2 |
| Processed: |  |  |  |  |  |  |  |
| Orange juice, concentrate 2/ | 16-fl. oz | 1.882 | 1.837 | 1.875 | 1.870 | -0.4 | 1.8 |
| Wine | liter | 5.290 | 5.573 | 6.390 | 6.068 | 20.8 | 8.9 |

-- Insufficient marketing to establish price.
1/ Dry pint.
2/ Data converted from 12 fluid ounce containers.
Source: Bureau of Labor Statistics, U.S. Department of Labor.

## Forecast for Larger Citrus Crop in 2001/02

The first estimates for the 2001/02 citrus crop, released October 12, is projecting an increase of 2 percent over last year but a decline of 3 percent from 2 years ago (table 3 ). This year, more oranges, grapefruit, and tangerines should be available for harvesting, but fewer lemons. Although a larger crop is expected over last year, the new crop would be about 3 percent smaller than 2 years ago. The crop estimate is likely to change as the season progresses and weather factors affect the condition and size of the fruit.

Florida's crop is projected to increase 4 percent over last season and accounts for almost all the expected increase in the citrus crop. Florida is the country's biggest citrus producer, contributing 77 percent of this year's crop. Florida mostly produces oranges for processing, grapefruit, and tangerines. California and Arizona produce most of the oranges for the fresh market, all the lemons produced in the United States, as well as some grapefruit and tangerines. Together, the two States produce 20 percent of the citrus crop. The Texas citrus crop is small relative to Florida or California/Arizona, but it continues to grow, producing mostly grapefruit. Much smaller amounts of citrus are grown in Louisiana. Since production is so small, the
U.S. Department of Agriculture's National Agricultural Statistics Service (NASS) does not include it in its citrus data. Louisiana citrus is sold locally.

## Fewer Fresh Oranges Expected from California And Arizona

Combined California and Arizona citrus production is forecast to be 6-percent smaller than last season and 8 -percent smaller than two seasons ago. The orange crop, which should account for 61 percent of the two States' citrus production, is forecast down 9 percent from last season and 16 percent from two seasons ago. The number of fruit per orange tree is the lowest on record, with an average set of 264 oranges per tree in the Central Valley, California's major orangegrowing region. Last year's set averaged 347 oranges per tree. As a result of the smaller set, the size of the fruit is the largest on record for September, when the survey for the California Navel Orange Objective Measurement Report, 2001/02, was conducted. Barring any adverse weather conditions, such as a severe freeze, this year's orange crop should reach 2.1 million tons, of which 59 percent are expected to be navel oranges, with Valencia oranges accounting for the remainder.

Table 3--Oranges: Utilized production, 1998/99-2000/01 and indicated 2001/02 1/

| Crop and State | Forecast |  |  |  |  |  |  | Forecast$2001 / 02$as of $10-2001$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Utilized |  |  | $\begin{aligned} & 2001 / 02 \\ & \text { as of } 10-2001 \end{aligned}$ | Utilized |  |  |  |
|  | 1998/99 | 1999/2000 | 2000/01 |  | 1998/99 | 1999/2000 | 2000/01 |  |
|  | --1,000 boxes 2/-- |  |  |  | --1,000 short tons-- |  |  |  |
| Oranges: |  |  |  |  |  |  |  |  |
| Early/mid season and navel 3/: |  |  |  |  |  |  |  |  |
| Arizona | 550 | 600 | 480 | 400 | 21 | 22 | 18 | 15 |
| California | 21,000 | 40,000 | 36,000 | 32,000 | 787 | 1,500 | 1,350 | 1,200 |
| Florida | 112,000 | 134,000 | 128,000 | 131,000 | 5,040 | 6,030 | 5,760 | 5,895 |
| Texas | 1,250 | 1,460 | 2,000 | 2,000 | 53 | 62 | 85 | 85 |
| Total | 134,800 | 176,060 | 166,480 | 165,400 | 5,901 | 7,614 | 7,213 | 7,195 |
| Valencia: |  |  |  |  |  |  |  |  |
| Arizona | 600 | 500 | 420 | 350 | 22 | 19 | 16 | 13 |
| California | 15,000 | 24,000 | 23,000 | 22,000 | 563 | 900 | 862 | 825 |
| Florida | 74,000 | 99,000 | 95,300 | 100,000 | 3,330 | 4,455 | 4,289 | 4,500 |
| Texas | 180 | 200 | 235 | 200 | 8 | 9 | 10 | 9 |
| Total | 89,780 | 123,700 | 118,955 | 122,550 | 3,923 | 5,383 | 5,177 | 5,347 |
| Total | 224,580 | 299,760 | 285,435 | 287,950 | 9,824 | 12,997 | 12,390 | 12,542 |

[^1]Table 4--Equivalent on-tree prices received for fresh California
The record size and reported good quality of this year's oranges should really help growers get good prices. Domestic and international consumers highly value these attributes, and the result should be strong demand for fresh oranges this season. Coupled with the smaller crop, the average price for fresh oranges could top $\$ 8.00$ per $75-\mathrm{lb}$ box. Prices should not, however, be nearly as high as during the 1998/99 season when a severe winter freeze drastically reduced the crop, pushing prices for all California oranges to an average of $\$ 17.97$ per box (table 4). Harvesting got underway in mid-October, slightly earlier than average. The 2000/01 Valencia crop harvest was still going in early October but beginning to wind down in time for the new crop of navel oranges.

## Lemon Crop from California/Arizona Forecast To Be Second Largest on Record

The California/Arizona lemon crop is estimated to total 992,000 tons, about 1 percent smaller than last year's

| oranges, 1996/97-2000/01 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :--- | ---: | ---: | ---: | ---: | ---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Month | $1996 / 97$ |  |  |  |  |  |  | 1997/98 |  |  |  |  |  | 1998/99 | 1999/2000 | $2000 / 01$ |
|  | -Dollars/75 -lb box-- |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| November | 10.50 | 8.70 | 12.51 | 11.83 | 8.73 |  |  |  |  |  |  |  |  |  |  |  |
| December | 8.40 | 8.00 | 12.39 | 7.22 | 7.63 |  |  |  |  |  |  |  |  |  |  |  |
| January | 8.20 | 6.90 | 20.59 | 6.32 | 7.23 |  |  |  |  |  |  |  |  |  |  |  |
| February | 7.47 | 6.90 | 19.06 | 5.12 | 7.76 |  |  |  |  |  |  |  |  |  |  |  |
| March | 7.80 | 8.06 | 18.58 | 5.18 | 10.21 |  |  |  |  |  |  |  |  |  |  |  |
| April | 9.27 | 11.36 | 23.89 | 4.95 | 11.85 |  |  |  |  |  |  |  |  |  |  |  |
| May | 10.18 | 11.60 | 21.96 | 6.06 | 11.45 |  |  |  |  |  |  |  |  |  |  |  |
| June | 8.42 | 10.26 | 19.26 | 6.70 | 7.52 |  |  |  |  |  |  |  |  |  |  |  |
| July | 8.82 | 8.32 | 16.16 | 4.09 | 6.42 |  |  |  |  |  |  |  |  |  |  |  |
| August | 10.52 | 7.12 | 14.96 | 3.59 | 6.92 |  |  |  |  |  |  |  |  |  |  |  |
| September | 10.72 | 7.53 | 18.46 | 3.89 | 7.83 |  |  |  |  |  |  |  |  |  |  |  |
| October | 9.79 | 8.43 | 17.76 | 4.16 | 7.62 |  |  |  |  |  |  |  |  |  |  |  |

Source: National Agricultural Statistics Service, USDA
very large crop (table 5). If realized, it would be the second largest crop since the 1995/96 season.
California's production is expected to reach 874,000 tons, the biggest since 1980/81 and 1 percent bigger than last season. Arizona's crop is expected to reach 118,000 tons, 14 percent smaller than last season, but the same as 1999/2000. Typically 50 to 60 percent of the crop goes to the fresh market, with the remainder being processed, mostly into juice.

Table 5--Lemons: Utilized production, 1998/99-2000/01 and forecast for 2001/02 1/

| State | Forecast for |  |  |  |  | Forecast for <br> $2001 / 02$ <br> as of $10-2001$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Utilized |  | 2001/02 | Utilized |  |  |
|  | 1998/99 1999/2000 | 2000/01 | 10-2001 | 1998/991999/2000 | 2000/01 |  |
|  | --1,000 (76-lb) boxes-- |  |  | --1,000 short tons-- |  |  |
| Arizona | 3,450 3,100 | 3,600 | 3,100 | 131118 | 137 | 118 |
| California | 16,200 19,000 | 22,700 | 23,000 | 616722 | 863 | 874 |
| Total | 19,650 22,100 | 26,300 | 26,100 | 747840 | 1,000 | 992 |

1/ The crop year begins with bloom of the first year shown and ends with completion of harvest the following year.
Source: National Agricultural Statistics Service, USDA.

Table 6--All lemons: State-average equivalent on-tree prices received by growers, 1997-2001

| Month | Arizona |  |  |  |  | California |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 1997 | 1998 | 1999 | 2000 | 2001 | 1997 | 1998 | 1999 | 2000 | 2001 |
|  | --Dollars/76-Ib box-- |  |  |  |  |  |  |  |  |  |
| January | 4.15 | 1.75 | 7.67 | 6.99 | 0.82 | 4.34 | 2.04 | 7.30 | 11.45 | 0.77 |
| February | 2.48 | 0.96 | 3.45 | 4.73 | -1.05 | 1.83 | 1.78 | 4.84 | 9.70 | 0.79 |
| March | 1.28 | 0.86 | 1.08 | 3.82 | -1.93 | 1.98 | 1.74 | 5.22 | 8.66 | 1.42 |
| April | -- | 0.25 | 1.13 | 1.80 | -- | 5.28 | 2.84 | 6.04 | 5.51 | 3.65 |
| May | -- | -- | -- | -- | -- | 15.34 | 6.88 | 7.87 | 3.65 | 5.46 |
| June | -- | -- | -- | -- | -- | 25.14 | 16.45 | 10.07 | 6.85 | 9.27 |
| July | -- | -- | -- | -- | -- | 29.44 | 23.33 | 13.76 | 11.91 | 16.14 |
| August | -- | -- | -- | -- | -- | 23.66 | 23.03 | 16.97 | 13.44 | 22.62 |
| September | 37.20 | 22.82 | 24.20 | 14.52 | 26.63 | 18.60 | 17.46 | 19.87 | 8.92 | 18.39 |
| October | 13.85 | 22.97 | 18.66 | 6.92 | 23.43 | 10.58 | 19.42 | 15.38 | 4.23 | 18.33 |
| November | 4.12 | 11.63 | 8.96 | 2.86 |  | 4.70 | 12.12 | 10.99 | 1.95 |  |
| December | 2.42 | 6.41 | 9.37 | 1.89 |  | 2.95 | 6.76 | 11.67 | 1.67 |  |

-- = Not available.
Source: National Agricultural Statistics Service, USDA.

The lemon harvest has already begun in Arizona and the southern and desert parts of California. Last season growers received an average of $\$ 5.00$ per 76lb box of lemons, the lowest since 1986/87 (table 6). The smaller crop this year should help boost prices. While California lemons are reported to be smaller than average, which can put downward pressure on prices, cooler weather should help increase size. Arizona lemons are reported to be large, which should help pricing. Both States' crops are reported to be good quality.

## Florida Crop Expected Bigger, Despite Drought and Freezing Temperatures

Florida's citrus crop is projected to total 12.9 million tons, up 4 percent from last season, but 3 percent lower than the previous season. The orange crop comprises about 80 percent of the total citrus crop, grapefruit 16 percent, and tangerines, tangelos, Temples, and K-early citrus the remaining 4 percent. Lime production estimates will be released in April 2002.

Orange production is estimated to increase 3 percent over last season, but be just slightly lower than 1999/2000. As always about 95 percent of the oranges will go to making juice. The 2000/01 crop experienced freezing temperatures during the past winter, with general winter temperatures colder than normal. Very dry conditions persisted throughout much of the winter and spring. Most groves are irrigated, however, minimizing the effects of the dry conditions.

The number of bearing trees in Florida declined this season mostly due to loss from disease. The amount of fruit per tree, however, was higher than last season. This factor, along with larger fruit than last season, accounted for the increase in the number of boxes of oranges expected to be harvested this season. The early- to mid-season oranges will account for 57 percent of the crop this year, with a production estimate of 5.9 million tons. Harvesting of the projected 2 percent bigger crop began in early

October. Much of the early harvested crop has gone to the fresh market as only a few processors have

Table 7--United States: Orange juice supply and utilization, 1986/87-2001/02 f/

| Season 1/ | Beginning stocks | Production | Imports | Supply | Exports | Domestic consumption | Ending stocks 2 / |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Million SSE gallons 3/ |  |  |  |  |  |  |
| 1986/87 | 204 | 781 | 557 | 1,542 | 73 | 1,267 | 201 |
| 1987/88 | 201 | 907 | 416 | 1,524 | 90 | 1,223 | 212 |
| 1988/89 | 212 | 970 | 383 | 1,564 | 73 | 1,258 | 233 |
| 1989/90 | 233 | 652 | 492 | 1,377 | 90 | 1,062 | 225 |
| 1990/91 | 225 | 876 | 327 | 1,429 | 96 | 1,174 | 158 |
| 1991/92 | 158 | 930 | 286 | 1,374 | 108 | 1,097 | 170 |
| 1992/93 | 170 | 1,207 | 326 | 1,703 | 114 | 1,339 | 249 |
| 1993/94 | 249 | 1,133 | 403 | 1,785 | 106 | 1,319 | 360 |
| 1994/95 | 360 | 1,257 | 198 | 1,815 | 117 | 1,415 | 283 |
| 1995/96 | 356 | 1,271 | 261 | 1,888 | 119 | 1,358 | 411 |
| 1996/97 | 411 | 1,437 | 257 | 2,105 | 148 | 1,454 | 502 |
| 1997/98 | 502 | 1,555 | 305 | 2,362 | 148 | 1,680 | 533 |
| 1998/99 | 533 | 1,236 | 346 | 2,115 | 150 | 1,438 | 527 |
| 1999/2000 | 534 | 1,507 | 339 | 2,380 | 141 | 1,594 | 645 |
| 2000/01 | 603 | 1,364 | 274 | 2,241 | 134 | 1,452 | 655 |
| 2001/02 f | 655 | 1,392 | 270 | 2,317 | 137 | 1,560 | 620 |

$f=F o r e c a s t$ 1/Season begins in December of the first year shown until 1998/99. Since 1999/2000, the marketing year has been changed to begin in October. 2/ Data may not add due to rounding. Beginning with 1994/95 ending stocks, stock data include chilled chilled as well as canned and frozen concentrate juice. $3 /$ SSE = single-strength equivalent. To convert to metric tons at 65 degrees brix, divide by $1,405.88$.

Sources: Economic Research Service and Foreign Agricultural Service, USDA.
started the new season. The larger early- to midseason crop will likely decrease the demand for imported orange juice needed to supplement domestic production. The Valencia crop, which is harvested after the early-to mid-season varieties are nearly finished, should be about 5 percent larger than last season.

Frozen concentrated orange juice (FCOJ) yields are projected to be 1.55 gallons per box of 42 degrees Brix concentrate, 2 percent lower than last season. Using the present projections for fruit production and yields, orange juice production for the 2001/02 season is forecast to increase 2 percent to 1.4 million gallons (table 7). With record beginning stocks, supplies this season should reach 2.3 million gallons. As a result, the Economic Research Service (ERS) projects that consumption will rise almost 8 percent to 5.6 gallons per person.

The projection of a larger orange crop and high beginning stocks is likely to put downward pressure on prices growers will receive early this season. Last season, growers received an average of $\$ 2.63$ per box, 28 percent lower than the previous season and the lowest since ERS has kept records (table 8). An expected smaller crop out of Brazil this year is likely to drive up world prices and may help Florida growers, especially once the large beginning stocks are driven down. This situation also improves the potential for greater exports of Florida orange juice this year and
Table 8--Processing oranges: Average equivalent on-tree prices
received by growers, Florida, 1996-2001
-- = Not available.
Source: National Agricultural Statistics Service, USDA.
that could also help prevent grower prices from falling below last season's and maybe even pull them above the 2000/01 levels.

In 2000/01, about 58 percent of Florida's processing oranges (including Temples, tangelos, and processed tangerines) went to making FCOJ, according to Florida Citrus Processor Association data. The remaining 42 percent was processed into not-from concentrate orange juice (NFC). Demand for NFC grew rapidly throughout the second half of the nineties, as consumers demonstrated that they are willing to pay a premium for the convenience and perceived higher quality of NFC. With the economy tightening this year, it will be the first real test for consumer's faithfulness to the product. Tightening consumer belts could possibly result in a switch back to FCOJ, which averaged about $\$ 2.12$ a gallon cheaper at the retail level in 2000/01. In 2001, however, Coca Cola re-entered the NFC market with its new product Simply Orange. The two major NFC brands already in the market, Pepsico's Tropicana and Florida Natural from the cooperative with the same name, are competing for market share with the new product with market promotions that include lower prices. As a result of the competition, consumers are benefiting from somewhat lower retail prices. In turn this could keep demand for NFC up despite the weaker economy.

This season's Brazilian orange crop is estimated to be 6 percent smaller than last season. There are fewer fruit per tree, and bearing acreage has decreased from a year ago. As a result, world prices of orange juice may be higher this year. Higher prices for Brazilian orange juice could help Florida orange growers with increased demand for their oranges.

## Bigger Grapefruit Crop Projected for 2001/02

The Florida grapefruit crop is projected to increase 4 percent to 2 million tons this season (table 9). If realized the crop would be 10-percent smaller than in $1999 / 2000$. The crop is broken down into 850,000 tons of white grapefruit and 1.2 million tons of red and pink grapefruit (excluding 127,500 tons that are expected by the Florida Agricultural Statistics Service (FASS) to be abandoned due to lack of demand). Together with grapefruit production in California, Arizona, and Texas, this season's grapefruit crop is expected to
reach 2.6 million tons. Both California and Arizona are forecast to produce smaller crops this season. Texas' crop, however, is forecast to be 8 percent bigger than last season and the largest since 1982/83.

In recent years, Florida growers have had difficulties getting good prices for their grapefruit due to weak demand. In 2000/01, Florida growers received an average $\$ 4.97$ per $85-\mathrm{lb}$ box of grapefruit for the fresh market, the lowest since 1997/98 (table 10). While fresh-market grapefruit prices were down this past season, growers received negative returns for their processing grapefruit, meaning they did not cover their costs of production. With slightly over half of last year's production going to processing, overall prices averaged $\$ 2.13$ per box. To help boost demand and improve grower prices, the Florida Department of Citrus, the major marketing arm of the Florida citrus industry, will begin new promotions for grapefruit this year.

Grapefruit juice beginning stocks coming into the new marketing year are lower than last year. This is good news for growers because it indicates there could be strong demand for processing fruit, boosting grower prices. While total demand for grapefruit juice was down last season, exports were higher. Grapefruit juice exports grew 19 percent last season over the previous season. Exports were higher to the number one export market, Canada, but down to the number two market, Mexico. Exports grew substantially to the third largest market, Barbados, bringing the quantity it receives back in line with previous years. Caribbean countries are important markets for U.S. grapefruit juice, much of which is consumed by tourists. Reduced travel this year by many Americans
could reduce demand by many of these countries for grapefruit juice. If export demand should fall and domestic demand does not pick up this season, there is an increased chance for economic abandonment of some of this year's grapefruit crop, beyond what is already projected by FASS and continued low prices to growers.

## 2001/02 Tangerine Crop Likely To Be Second Largest On Record

The new-season tangerine crop is estimated to be 449,000 tons, up 22 percent from last season (table 11). Florida production, which accounts for 74 percent of the crop, is tied with its record 1999/2000 crop. While California's crop is also expected to be the same as in 1999/2000, Arizona's crop is expected to be down 8 percent from last year, and 29 percent lower than two seasons ago. In Florida, the early varieties of tangerines are expected to comprise 69 percent of the whole crop. Early varieties consist of Sunburst, Fallglo, Robinson, and Dancy.

Sunburst tangerines make up about 80 percent of the early varieties produced in Florida. The number of Sunburst and Fallglo bearing trees declined this season, however, the set for both varieties is higher, resulting in the expected larger crop. Unlike Florida's oranges and grapefruit, this season's early tangerines are expected to be average to below average in size. Honey tangerines are Florida's dominant late variety. Production is forecast to increase 7 percent this season. The number of bearing trees increased slightly, but fruit set declined 13 percent from last season. Honey tangerines are expected to be large this season, with fewer fruit needed to fill a $95-\mathrm{lb}$ box.

Table 9--Grapefruit: Utilized production, 1997/98-1999/2000 and indicated 2000/01 1/

| Crop andState | Utilized |  |  | $\begin{gathered} \text { Forecast for } \\ 2001 / 02 \\ \text { as of } 10-2001 \end{gathered}$ | Utilized |  |  | $\begin{gathered} \text { Forecast for } \\ 2001 / 02 \\ \text { as of } 10-2001 \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 1998/99 | 1999/2000 | 2000/01 |  | 1998/99 | 1999/2000 | 2000/01 |  |
|  | --1,000 boxes 2/-- |  |  |  | --1,000 short tons-- |  |  |  |
| Florida, all | 47,050 | 53,400 | 46,000 | 48,000 | 2,000 | 2,269 | 1,955 | 2,040 |
| Colored | 28,700 | 31,900 | 27,300 | 28,000 | 1,220 | 1,356 | 1,160 | 1,190 |
| White | 18,350 | 21,500 | 18,700 | 20,000 | 780 | 913 | 795 | 850 |
| Arizona | 750 | 450 | 250 | 200 | 25 | 15 | 8 | 7 |
| California | 7,300 | 7,200 | 6,500 | 6,000 | 244 | 241 | 218 | 201 |
| Texas | 6,100 | 5,930 | 7,200 | 7,800 | 244 | 237 | 288 | 312 |
| Total | 61,200 | 66,980 | 59,950 | 62,000 | 2,513 | 2,762 | 2,469 | 2,560 |

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: California and Arizona-67, Florida-85, and Texas-80.
Source: National Agricultural Statistics Service, USDA.

While the larger crop this season may be expected to put downward pressure on grower prices, the expected smaller fresh orange crop could be a plus for tangerine growers, keeping prices in line with last season. A deciding factor in tangerine movement in the U.S. market is the availability and quality of imported Spanish clementines this winter. If Spain has a good crop this season, we will be seeing more clementines in the market, directly competing with the U.S. tangerine crop and affecting grower prices.

Figure 3
Fresh tangerines: Equivalent on-tree prices received by growers, 1998/99-2000/01


Source: National Agricultural Statistics Service, USDA.

Table 10--Grapefruit: Monthly equivalent on-tree prices received by growers, 1997-2001

| Florida |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | All |  |  |  | Fresh market |  |  |  |  | Processing |  |  |  |  |
| Month | 1997 | 1998 | 1999 | 2000 | 2001 | 1997 | 1998 | 1999 | 2000 | 2001 | 1997 | 1998 | 1999 | 2000 | 2001 |
|  |  | --Dollars/85-lb box-- |  |  |  | --Dollars/85-lb box-- |  |  |  |  |  | --Dollars/85-lb box-- |  |  |  |
| January | 1.99 | 1.53 | 2.35 | 4.40 | 2.24 | 3.75 | 3.27 | 4.39 | 7.42 | 4.30 | -0.06 | -0.29 | 0.19 | 1.95 | 0.39 |
| February | 1.52 | 1.19 | 2.02 | 3.79 | 2.29 | 3.29 | 3.46 | 4.88 | 6.50 | 4.86 | 0.09 | -0.13 | 0.31 | 2.10 | 0.71 |
| March | 1.05 | 0.70 | 1.82 | 3.21 | 1.69 | 3.88 | 3.11 | 5.07 | 6.22 | 5.13 | 0.07 | -0.30 | 0.40 | 2.27 | 0.18 |
| April | 0.90 | 0.65 | 2.08 | 2.83 | 1.39 | 3.24 | 2.97 | 5.43 | 5.63 | 5.32 | -0.02 | -0.40 | 0.61 | 2.21 | 0.23 |
| May | 0.53 | 0.34 | 2.12 | 2.31 | 1.13 | 1.92 | 2.29 | 6.92 | 4.19 | 5.35 | -0.05 | -0.40 | 0.51 | 1.95 | 0.36 |
| June | 1.42 | -- | -- | 1.75 | 1.23 | 2.16 | -- | -- | 4.12 | 5.67 | 0.40 | -- | -- | 0.83 | 0.18 |
| July | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| August | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Septembeı | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| October | 3.65 | 4.53 | 7.11 | 4.58 | 4.79 | 4.57 | 6.20 | 9.16 | 5.77 | 7.20 | -0.31 | 0.30 | 0.95 | -2.01 | -2.05 |
| November | 1.93 | 2.91 | 4.29 | 2.38 |  | 3.36 | 4.89 | 6.00 | 4.32 |  | -0.71 | -1.03 | 1.04 | -1.63 |  |
| December | 2.10 | 2.31 | 4.34 | 2.28 |  | 3.77 | 4.22 | 6.52 | 3.99 |  | -0.59 | -0.22 | 1.52 | -0.20 |  |
|  |  | Fresh-Arizona |  |  |  | Fresh-California |  |  |  |  | Fresh-Texas |  |  |  |  |
|  | 1997 | 1998 | 1999 | 2000 | 2001 | 1997 | 1998 | 1999 | 2000 | 2001 | 1997 | 1998 | 1999 | 2000 | 2001 |
|  |  | --Dollars/67-lb box-- |  |  |  | --Dollars/67-lb box-- |  |  |  |  |  | --Dollars/80-lb box-- |  |  |  |
| January | 2.92 | 2.62 | 3.41 | 3.35 | 4.19 | 8.62 | 7.32 | 13.01 | 10.35 | 9.19 | 3.75 | 3.85 | 5.55 | 6.85 | 2.75 |
| February | 3.72 | 3.82 | 3.31 | 3.25 | 3.29 | 6.32 | 5.22 | 9.21 | 8.35 | 7.29 | 2.95 | 4.85 | 5.25 | 5.55 | 2.35 |
| March | 2.50 | 3.82 | 4.31 | 4.15 | 6.89 | 5.02 | 5.82 | 6.91 | 6.55 | 7.59 | 3.25 | 4.25 | 4.25 | 6.35 | 2.05 |
| April | 3.92 | 4.22 | 4.91 | 4.25 | 5.79 | 4.92 | 6.82 | 6.21 | 4.75 | 6.89 | 3.35 | 4.75 | 5.05 | 5.95 | 2.05 |
| May | 4.12 | 5.92 | 7.11 | 4.15 | 4.09 | 5.52 | 8.32 | 10.31 | 5.95 | 9.39 | 3.35 | 4.75 | 6.05 | 5.95 | 1.45 |
| June | 3.82 | 7.82 | 7.71 | 4.35 | 3.79 | 7.22 | 9.22 | 12.61 | 8.05 | 8.69 | -- | -- | -- | -- | 1.45 |
| July | 2.42 | 7.52 | 7.21 | 4.65 | -- | 7.32 | 10.52 | 10.81 | 7.15 | 7.79 | -- | -- | -- | -- | -- |
| August | -- | -- | -- | -- | -- | 6.52 | 12.52 | 7.21 | 6.85 | 7.29 | -- | -- | -- | -- | -- |
| Septembeı | -- | -- | -- | -- | -- | 6.52 | 16.37 | 4.21 | 7.25 | 7.62 | -- | -- | -- | 5.35 | -- |
| October | -- | -- | -- | -- | -- | 4.72 | 16.37 | 7.51 | 8.65 | 8.32 | 6.45 | 14.05 | 13.45 | 5.35 | 11.05 |
| November | 1.72 | -- | -- | 4.79 |  | 5.02 | 13.71 | 11.65 | 9.79 |  | 5.55 | 9.05 | 10.55 | 5.55 |  |
| December | 2.72 | 4.61 | 4.35 | 4.59 |  | 7.52 | 12.61 | 10.85 | 9.39 |  | 4.65 | 8.05 | 6.95 | 3.15 |  |

-- = Not available.
Source: National Agricultural Statistics Service, USDA.

Table 11-Other citrus: Utilized production, 1998/99-2000/01 and forecast for 2001/02 1/

| Crop and State | Forecast for |  |  |  |  |  | Forecast for |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Utilized |  |  | 2001/02 | Utilized |  |  | 2001/02 |
|  | 1998/99 | 1999/2000 | 2000/01 | 10-2001 | 1998/99 | 1999/2000 | 2000/01 | 10-2001 |
|  | --1,000 boxes 2/-- |  |  |  | --1,000 short tons-- |  |  |  |
| Tangelos: |  |  |  |  |  |  |  |  |
| Florida | 2,550 | 2,200 | 2,100 | 2,300 | 115 | 99 | 95 | 104 |
| Tangerines: |  |  |  |  |  |  |  |  |
| Arizona | 950 | 850 | 650 | 600 | 36 | 32 | 24 | 23 |
| California | 1,500 | 2,500 | 2,100 | 2,500 | 56 | 94 | 79 | 94 |
| Florida | 4,950 | 7,000 | 5,600 | 7,000 | 235 | 332 | 266 | 332 |
| Total | 7,400 | 10,350 | 8,350 | 10,100 | 327 | 458 | 369 | 449 |
| Temples: |  |  |  |  |  |  |  |  |
| Florida | 1,800 | 1,950 | 1,250 | 1,400 | 81 | 88 | 56 | 63 |

1/ The crop year begins with bloom of the first year shown and ends with completion of harvest the following year.
2/ Net pound per box: tangerines--California and Arizona--75; Florida--95; tangelos--90; Temples--90.
Source: National Agricultural Statistics Service, USDA.

## Larger Pecan Crop Expected for 2001

The pecan crop for 2001 is projected to total 355.3 million pounds (in-shell basis), 69 percent bigger than last year. Due to the alternate-bearing nature of nut trees, this year's crop is on an "on" cycle, with production more comparable with 2 years ago. Compared with the 1999 crop, this year's production is expected to be 13 percent smaller.

Much of the pecan production is located in Georgia, Texas, and New Mexico. Together these States represent 68 percent of the total in 2001. Adverse weather conditions during part of the growing season in Georgia limited the production increase to the affects of the alternating cycle. Good growing conditions in New Mexico and Texas worked with the alternating cycle to boost the production beyond the amount produced in 1999. Production in Oklahoma, the third largest producer until a disastrous crop in 2000, showed signs of recovering, increasing from 2.5 million pounds to 30 million pounds. This year's crop, however, is still less than half the size of the 1999 crop.

Despite the smaller crop in 2000, domestic pecan consumption rose as a result of large beginning stocks coming into the year. While stocks were lower coming into the 2001 season, they were still high for coming in from an off year in production. As a result
of the large beginning stocks and crop size, per capita pecan consumption is estimated to increase to 0.49 pound this year (fig. 4). If realized, Americans would have consumed 15 percent more pecans this year than a year ago, and the largest amount since 1994.

As a result of the larger crop this year, grower prices are likely to be down in 2001/02. Despite the lower prices, the gross revenue is expected to rise above last year because of strong consumer demand.

Figure 4
Per capita pecan consumption, 1990-2001


Source: Economic Research Service, USDA.

Table 12--Pecans: Supply and utilization (shelled basis), 1997/98 to 2001/02

| Season 1/ | Utilized production | Imports | Beginning stocks | Total supply $2 /$ | Ending stocks | Exports | Total Consumption |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | --1,000 pounds-- |  |  |  |  |  |  |
| 1997/98 | 148,141 | 24,638 | 59,723 | 232,501 | 98,027 | 20,808 | 113,666 |
| 1998/99 | 65,501 | 28,449 | 98,027 | 191,976 | 50,283 | 19,960 | 121,734 |
| 1999/2000 | 160,396 | 26,446 | 50,283 | 237,125 | 110,265 | 18,854 | 108,006 |
| 2000/01 | 92,647 | 20,238 | 110,265 | 223,149 | 85,128 | 20,566 | 117,455 |
| 2001/02 3/ | 142,120 | 26,265 | 85,128 | 253,514 | 98,066 | 18,630 | 136,818 |

1/ Season beginning July 1. 2/ Utilized production, plus imports, plus beginning stocks. 3/ Preliminary estimates.
Source: Economic Research Service, USDA.

## Fruit And Nut Trade Outlook

## Exports Strong for Most Major Fresh Fruit

Citrus exports are likely to be up in 2001/02, with sufficient supplies and good quality fruit. Larger sizes for this season's fresh oranges and grapefruit are a plus for exporters because consumers in the major Asian markets have a preference for larger fruit.

The fresh orange 2000/01 season is almost over (table 13). By early November, there were still some Valencia oranges remaining, but they were quickly being replaced by the new-crop navel oranges. As of the end of August, fresh orange exports ran 9-percent above the previous season.

Exports to Canada were slightly lower than last season, however, shipments were up to all the other major markets for U.S. oranges. Shipments rose dramatically to China since its market has opened to U.S. citrus and it now ranks as the sixth major destination for U.S. fresh oranges. When Hong Kong shipments are added in with those going to the mainland, China has become the third most important destination for U.S. oranges. With China's entrance into the World Trade Organization expected early in 2002, prospects for U.S. orange shipments to the country look promising for the next several years.

Lemon exports dropped 31 percent for the first month of the season. Shipments were off to Japan and Canada, the two major markets, however, they were higher to Mexico and South Korea. With the season just underway, exports are expected to pick up.

Lemon imports almost doubled during 2000/01 from the season before. This past season was the first full season that Argentine lemons were allowed in the U.S. market, and its shipments accounted for almost half the imports (fig. 5). With Argentine shipments entering the U.S. market during the U.S. summer season, August shipments for the new marketing year also showed a marked increase (table 14). The agreement between the United States and Argentina allows Argentine lemons into the United States but limits sales to exclude U.S. citrus-producing States and their neighboring States. In October, California citrus growers, under the auspices of the U.S. Citrus Science Council, won a decision before a California

Figure 5
Fresh lemon imports by country of origin


District judge to stop Argentine lemon imports into the United States. The judge questioned the methods used by the U.S. Department of Agriculture's Animal and Plant Health Inspection Service (APHIS) when it determined that the imported Argentine lemons would not pose a phytosanitary threat to the U.S. citrus crop. This decision will have minimal effect on Argentine shipments until next summer when their season begins again.

Fresh grapefruit exports are likely to be higher this season. Hurricane Michelle damaged the grapefruit crop in Cuba, Florida's major competitor. As a result, there will be fewer grapefruit out of Cuba, increasing demand for grapefruit grown in Florida. Export demand is also expected to be higher this year because of the larger fruit and good quality. With the Florida grapefruit industry increasingly relying on exports to market their crop, the increased demand from other countries should help push up prices.

APHIS modified its regulations concerning Mexican avocados this fall. Effective this November, Mexican avocados can now be shipped to 12 additional States, bringing the total number of States that now can receive them to 31 . Imports will now be allowed into the United States from October 15 through April 15, 2 months more than the initial regulation from November 1 through February 28.

Avocado shipments have been growing steadily since the U.S. market was opened to Mexico in 1997, however, Mexico's share of U.S. imports was the greatest last year when they accounted for 34 percent of the total. So far this season, from November through August, Mexico accounts for only 22 percent of total avocado imports, with Mexican shipments declining 14 percent from the same period a year ago. The major source of imported avocados into the U.S. market remains Chile, with its share of the market increasing from 51 percent in 1996/97 to 58 percent this season. Imports from Chile increased 86 percent so far this season from last season. Chilean avocados are shipped to the United States during California's off-season and help to provide a year-round supply. Mexico's shipments occur at the same time as California's. If this year's California crop is smaller,
as the industry expects, this could boost demand for Mexican imports. This factor, along with the expansion of both the location and time period for these imports should drive overall Mexican avocado shipments into the United States up substantially this season.

Pecan exports are off for the 2-month period July and August of 2001 over the same period last year. The smaller crop of pecans in 2000/01 reduced the inventory of nuts available at the end of the season. Since the 2001/02 crop is expected to be larger, exports should pick up once harvesting is completed this fall.

Table 13--U.S. exports of selected fruit and tree nut products

| Commodity |  | Season-to-d | hrough August) | Year-to-date change |
| :---: | :---: | :---: | :---: | :---: |
|  | Marketing season | 2000 | 2001 |  |
|  |  | --- 1,000 pounds --- |  | Percent |
| Fresh-market: |  |  |  |  |
| Oranges | November-October | 1,125,078 | 1,224,980 | 8.9 |
| Grapefruit | September-August | 861,776 | 860,939 | -0.1 |
| Lemons | August-July | 15,358 | 10,594 | -31.0 |
| Apples | August-July | 104,565 | 98,565 | -5.7 |
| Grapes | May-April | 219,920 | 254,561 | 15.8 |
| Pears | July-June | -- | -- | -- |
| Peaches (including nectarines) | January-December | 197,821 | 219,283 | 10.8 |
| Strawberries | January-December | 113,895 | 103,180 | -9.4 |
| Sweet cherries | January-December | 78,069 | 83,884 | 7.4 |
|  | --- 1,000 gallons --- |  |  |  |
| Processed: |  |  |  |  |
| Orange juice, frozen concentrate | October-September | 720,625 | 533,292 | -26.0 |
| Orange juice, not from concentrate | October-September | 629,086 | 588,450 | -6.5 |
| Grapefruit juice | December-November | 303,576 | 364,788 | 20.2 |
| Apple juice and cider | August-July | 91,773 | 70,219 | -23.5 |
| Wine | January-December | 466,898 | 520,510 | 11.5 |
|  | --- 1,000 pounds --- |  |  |  |
| Raisins | August-July | -- | -- | -- |
| Canned pears | June-May | 2,018 | 1,560 | -22.7 |
| Canned peaches | June-May | 7,427 | 5,212 | -29.8 |
| Frozen strawberries | January-December | 28,480 | 30,350 | 6.6 |
|  | --- 1,000 pounds --- |  |  |  |
| Tree nuts: |  |  |  |  |
| Almonds (shelled basis) | August-June | 411,450 | 470,612 | 14.4 |
| Walnuts (shelled basis) | August-July | 89,188 | 497,273 | 457.6 |
| Pecans (shelled basis) | July-June | 3,612 | 3,544 | -1.9 |
| Pistachios (shelled basis) | September-August | 12,815 | 23,614 | 84.3 |

-- = No data.
Source: Bureau of the Census, U.S. Department of Commerce.

Table 14--U.S. imports of selected fruit and tree nut products

| Commodity | Marketing season | Season-to-date (through August) |  | Year-to-date change |
| :---: | :---: | :---: | :---: | :---: |
|  |  | 2000 | 2001 |  |
|  |  | --- 1,000 pounds --- |  | Percent |
| Fresh-market: |  |  |  |  |
| Oranges | November-October | 92,498 | 107,932 | 16.7 |
| Tangerines | October-September | 206,399 | 205,586 | -0.4 |
| Lemons | August-July | 15,446 | 26,212 | 69.7 |
| Limes | September-August | 396,946 | 426,510 | 7.4 |
| Apples | August-July | 27,230 | 15,657 | -42.5 |
| Grapes | May-April | 211,799 | 182,528 | -13.8 |
| Pears | July-June | 1,115 | 587 | -47.4 |
| Peaches (including nectarines) | January-December | 79,982 | 102,005 | 27.5 |
| Bananas | January-December | 6,104,493 | 5,662,619 | -7.2 |
| Mangoes | January-December | 453,365 | 423,323 | -6.6 |
|  | --- 1,000 gallons --- |  |  |  |
| Processed: |  |  |  |  |
| Orange juice, frozen concentrate | October-September | 2,789,960 | 2,043,691 | -26.7 |
| Apple juice and cider | August-July | 183,366 | 263,400 | 43.6 |
| Wine | January-December | 674,308 | 716,904 | 6.32 |
|  | --- 1,000 pounds --- |  |  |  |
| Canned pears | June-May | 723 | 5,599 | 674.4 |
| Canned peaches | June-May | 18,193 | 20,414 | 12.2 |
| Canned pineapple | January-December | 475,004 | 387,515 | -18.4 |
| Frozen strawberries | January-December | 73,016 | 61,398 | -15.9 |
|  | --- 1,000 pounds --- |  |  |  |
| Tree nuts: |  |  |  |  |
| Brazil nuts (shelled basis) | January-December | 16,274 | 12,272 | -24.6 |
| Cashews (shelled basis) | January-December | 120,663 | 116,382 | -3.5 |
| Pine nuts (shelled basis) | January-December | 2,262 | 4,557 | 101.5 |
| Pecans (shelled basis) | July-June | 2,348 | 109 | -95.4 |

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

## Cranberries: Not Just For the Holidays Anymore

The American cranberry (Vaccinium macrocarpon) is one of only three North American native fruits that are commercially grown in the United States. Historically, cranberries were used by Native Americans as a food, fabric dye, and medicine for a variety of illnesses, including bladder infections.

Today, cranberries continue to offer several important health benefits. Besides helping to maintain urinary tract health, recent research has also indicated cranberries to be an excellent source of antioxidants that protect against cancer, heart disease, and other diseases. Besides being highly nutritious, the versatility of cranberries in many food and beverage recipes aid in their popularity among American consumers.

Most of today's cranberries grow on manmade wetlands (or bogs) which are individual dryland beds layered mostly of sand and peat soil. Vine cuttings from already established beds are used for new propagation. The vines are irrigated and fertilized during the growing season which starts around May and lasts throughout the summer.

The harvest season for American cranberries runs from around mid-September until the end of October. A portion of the fresh-market berries is exported to Canada for the Canadian Thanksgiving holiday celebrated in early October. The remainder of the fresh-market berries are stored until they are ready to be packed and marketed for the U.S. holiday market.

Done mechanically, harvesting is accomplished using two methods-wet and dry. Cranberries for processing are wet harvested, while those for the fresh market are dry harvested. Following the harvest season, growers usually flood the beds during the winter when the vines turn dormant. Water in the beds freezes and protects the vines from frost or severe freezes.

Adapted to specific growing conditions, cranberry production is limited to mostly the northern portion of the United States. According to data from the

National Agricultural Statistics Service, including the most recent Census of Agriculture, providing 1997 data, Wisconsin is the largest producer, with nearly half of U.S. production. On average, Wisconsin harvests 39 percent of the acreage, but it is home to only 20 percent of the farms growing cranberries. Wisconsin's share of cranberry acreage is up only slightly from 1992.

Massachusetts is the second-largest producer of cranberries, with over one-third of total production. Massachusetts' acreage is fractionally smaller than Wisconsin's but it houses 51 percent of the farms. New Jersey, Oregon, and Washington complete the top five producing States, with another 22 percent of U.S. acreage. Maine and Michigan are also minor producing States reported in the Census of Agriculture. During 1997, each of these two States only harvested 0.1 percent of U.S. acreage.

Traditionally, cranberries were eaten only with holiday turkeys. Nowadays, cranberries are consumed year round as products come in many forms-frozen berries, sauce, juice and juice blends, and dried fruit. Approximately 94 percent of the 573.9 million pounds of cranberries used domestically moved into the processing sector (mostly for juice and juice blends) during 1998 to 2000.
U.S. cranberries were produced on 1,059 farms (1997 data). The farm value of U.S. cranberries was $\$ 106.8$ million in 2000.

During the mid-1990s, heightened awareness of the many health benefits offered by this American berry boosted U.S. demand for cranberry products, particularly for juice and juice blend products. U.S. cranberry juice consumption during the mid- to-late 1990's increased 26 percent from earlier in the decade, to an average of 0.20 gallon per person.
U.S. cranberry production has increased rapidly in response to the growth in consumption. With its first successful cultivation dating back to 1816 , today over 36,000 acres of cranberry bogs are being harvested each year in the United States. Production reached a record high of 632 million pounds in 1999, up from 339.3 million pounds in 1990.

Over the last few years, however, U.S. cranberry production has exceeded market demand, causing inventories to accumulate and grower prices to fall sharply. In efforts to battle the glut situation, this is the second consecutive year that the volume control authorized by the Federal marketing order was used by USDA to restrict the amount of cranberries (excluding fresh-market and organically-grown berries) that can be delivered to packers during the current marketing season. The 2001 U.S. cranberry crop is forecast at 558 million pounds, down 1 percent from 2000 and down 12 percent from the record crop of 2 years ago.

Trade plays a minor role in the U.S. cranberry industry. Although small relative to total supply, the U.S. remains a net importer of cranberries, with Canada as its major supplier. A majority of the imports come in fresh form but most of these fresh berries end up for processing.

Figure 6
U.S. cranberry production and season-average grower price, 1990-2001


Source: National Agricultural Statistics Service, USDA.

Table 15--Cranberries: Acreage, production, and value, 2000

| State | Acres <br> harvested | Yield | Production | Season-avg. <br> price | Crop <br> value |
| :--- | ---: | ---: | ---: | ---: | ---: |
|  | Acres | Barrels $1 /$ | 1,000 barrels | $\$ /$ barrel | $\$ 1,000$ |
| Massachusetts | 13,900 | 140.3 | 1,950 | 19.90 | 38,805 |
| New Jersey | 3,700 | 132.2 | 489 | 19.90 | 9,333 |
| Oregon | 2,400 | 152.1 | 365 | 18.90 | 5,765 |
| Washington | 1,500 | 120.0 | 180 | 25.20 | 4,151 |
| Wisconsin | 15,100 | 176.0 | 2,658 | 19.00 | 48,773 |
|  |  |  |  |  |  |
| United States | 36,600 | 154.2 | 5,642 | 19.60 | 106,827 |

1/1 Barrel=100 pounds.
Source: National Agricultural Statistics Service, USDA.

## Special Articles

The following links are for recent articles released on subjects directly related to the fruit and tree nuts industry. These articles are in Adobe Acrobat format.

## 1. Demographic Profile of Apple Consumption in the United States

http://www.ers.usda.gov/publications/fts/Sep01/AppleCons.p df
U.S. per capita consumption of apples has risen over the past three decades, with consumption of processed apple products exceeding consumption of fresh apples in the last 20 years. Using data from the U.S. Department of Agriculture's 1994-96, and 1998 Continuing Survey of Food Intakes by Individuals, this article examines the distribution of fresh and processed apple consumption in the United States. Apple consumption was analyzed based on food source, region of the country, urbanization, racial or ethnic make-up, income class, age, and gender.

## 2. Competitive Behavior in Orange Juice Markets <br> http://www.ers.usda.gov/publications/fts/Sep01/OrangeJuice. pdf

This article examines how the movement towards a larger more consolidated orange juice marketing system affects market prices. Retail prices for specific orange juice products in 54 U.S. markets over a 1-year period were examined. The data provided little compelling evidence that markets further advanced in the consolidation process engaged in non-competitive pricing behavior. However, increased brand competition does appear to lower average market prices.

## Data Tables

The following links provide the tabular data on fruits associated with this issue of the Fruit and Tree Nuts Outlook. You may choose links for Excel 97 workbook (spreadsheet) tables.

Compilations:

## 1. Grapefruit production and price

XLS files:
http://www.ers.usda.gov/publications/fts/Nov01/GfProd.xls http://www.ers.usda.gov/publications/fts/Nov01/GfPrice.xls

## 2. Lemon production and price

XLS file:
http://www.ers.usda.gov/publications/fts/Nov01/LProd.xls http://www.ers.usda.gov/publications/fts/Nov01/LPrice.xls

## 3. Lime production and price

XLS file:
http://www.ers.usda.gov/publications/fts/Nov01/LimePr.xls

## 4. Orange production and price

XLS file:
http://www.ers.usda.gov/publications/fts/Nov01/Oprod.xls http://www.ers.usda.gov/publications/fts/Nov01/OPrice.xls

## 5. Pecan production and price

XLS file:
http://preview.ers.usda.gov/publications/fts/Nov01/Pecan.xls

## Contact Information:

Agnes Perez (202) 694-5255; acperez@ers.usda.gov Susan Pollack (202) 694-5251; pollack@ers.usda.gov

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, sex, religion, age, disability, political beliefs, sexual orientation, or marital or family status. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at (202) 720-2600 (voice and TDD).

To file a complaint of discrimination, write USDA, Director, Office of Civil Rights, Room 326-W, Whitten Building, 14th and Independence Avenue, SW, Washington, DC 20250-9410 or call (202) 720-5964 (voice and TDD). USDA is an equal opportunity provider and employer.


[^0]:    1/ Equivalent on-tree price.
    2/ Equivalent packinghouse-door returns for CA, NY (apples only), OR (pears only), and WA (apples, peaches, and pears). Prices as sold for other States.
    Source: National Agricultural Statistics Service, USDA.

[^1]:    1/ The crop year begins with bloom of the first year shown and ends with completion of harvest the following year. </ INet pounas per dox: Arızona and valıornıa--/b id, rıorıaa--yu id, and ıexas--৪ל ib.
    3/ Navel and miscellaneous varieties in California and Arizona, and early- and mid-season (including Navel) varieties in Florida and Texas. Small quantity tangerines also included in Texas.
    Source: National Agricultural Statistics Service, USDA.

