USDA
United States Department of Agriculture

FTS-352

June 28, 2012

Outlook

A Report from the Economic Research Service

www.ers.usda.gov

Fruit and Tree Nuts Outlook

Agnes Perez
acperez@ers.usda.gov
Kristy Plattner
kplattner@ers.usda.gov

Lower Supplies Aid Early Summer Fruit Prices

The next release is September 27, 2012.

Approved by the World Agricultural Outlook Board.

Beginning in 2012, *Fruit and Tree Nuts Outlook* will consist of four issues released in March, June, September, and December. Market analysis and data coverage for melons is now included in*Fruit and Tree Nuts Outlook* and *Fruit and Tree Nuts Yearbook*. Market analysis of melons prior to 2012 can be found in historical *Vegetable and Melon Outlook* reports.

This season's Southern Hemisphere blueberry shipments to the United States (primarily from Chile) have already ended and sourcing has now transitioned to domestic production. Current domestic pricing for fresh blueberries is above last year's, caused by an early finish to Chilean shipments this winter and anticipated smaller crops in Florida and Georgia—production States that are the earliest to come into blueberry season each year.

USDA's Agricultural Marketing Service (AMS) 2012 weekly shipment data support industry expectations for lower peach production this year in the top three States—California, South Carolina, and Georgia. Aside from lower production, these crops are producing good-quality fruit with high sugar levels that could bode well for pricing this year's harvest.

Harvesting of the 2012 California sweet cherry crop was in full swing by early June, with the State's total crop size anticipated to be average but larger than last year's below-average crop of 75,000 tons. Through early June, cumulative 2012 shipments of California fresh cherries were running 4 percent above the same time last year, based on AMS data. These larger supplies are putting downward pressure on 2012 domestic cherry prices.

USDA's National Agricultural Statistics Service (NASS) California Field Office forecast California's 2012 dried plum (prune) crop at 120,000 tons, dried basis, down 12 percent from the 2011 revised estimate of 137,000 tons and 15percent smaller than the 2008-10 average crop size. In addition to the forecast smaller crop, lower carry-in inventories point to a decline in overall prune supplies during the 2012/13 marketing season, likely driving up new-season prices for California prunes.

California's 2012 almond forecast pins the upcoming harvest volume at 2 billion pounds. If realized, this will be less than 2 percent below last year's recordbreaking harvest of 2.03 billion pounds. Aided by current large inventories, exports should remain strong for the remainder of 2011/12.

Price Outlook

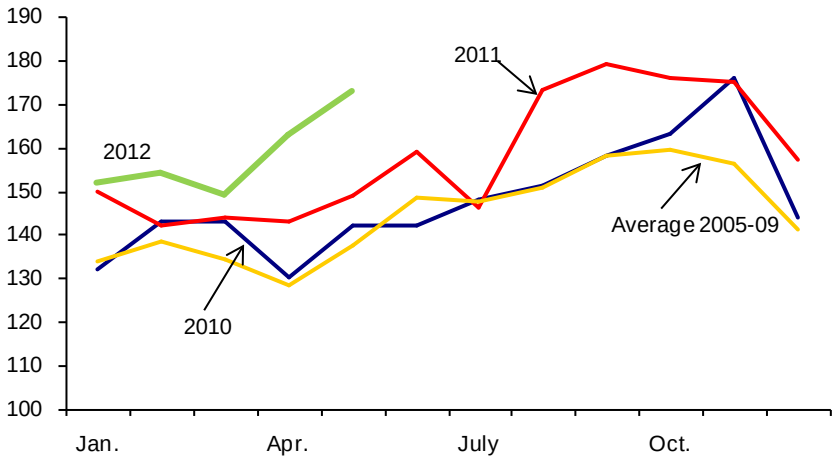
Fruit and Tree Nut Grower Prices Remain Strong In May

The index of prices received by fruit and tree nut growers rose 10 points in May over the previous month to 173 (1990-92=100) while also gaining 24 points over the 2011May index (fig.1). The index has remained consistently higher than a year ago since January, with the May index showing the strongest year-to-year gain.

Pulling the May 2012 index up from the previous month were price increases for most major citrus fruits as well as for fresh pears and apples, influenced by seasonal tightening of supplies during the spring (table 1). In contrast, May strawberry prices weakened from the previous month with larger supplies as harvesting in California was in full swing and other producing States also entered the market. In addition to the availability of early-variety peaches in California, a relatively mild winter in the southeastern United States this year advanced the harvest in the region's major peach-growing States, bringing supplies to market earlier than normal. A year ago, peach supplies in May were too limited to report an average price. As the California Valencia orange harvest gets fully underway this summer, seasonal increases in supply should drive down fresh orange prices. Meanwhile, the winding down of the 2011/12 California lemon harvest should continue to strengthen lemon prices into early summer approaching the peak demand period.

The 2012 May grower price index for fruit and nuts is higher than the average for May over the past few years. The strength of the index relative to the May 2011 index may be attributed to substantially higher prices for fresh grapefruit, lemons, oranges, and apples, and more moderate price increases for strawberries and peaches. Fresh pear grower prices in May, however, were reported down 28 percent, consistent with past months since October 2011, mostly due to current-season's larger domestic production.

Figure 1
Index of prices received by growers for fruit and tree nuts
1990-92=100



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

Table 1--Monthly fruit prices received by U.S. growers

Commodity	2011		2012		2011-12 change	
	April	May	April	May	April	May
	Dollars per box				*Percent*	
Citrus fruit: 1/						
Grapefruit, all	5.27	7.55	6.42	13.83	21.8	83.2
Grapefruit, fresh	10.35	10.44	11.89	13.83	14.9	32.5
Lemons, all	8.54	10.26	15.36	16.80	79.9	63.7
Lemons, fresh	14.83	16.13	18.89	21.29	27.4	32.0
Oranges, all	7.00	7.53	9.34	10.20	33.4	35.5
Oranges, fresh	9.23	10.62	13.08	14.79	41.7	39.3
Noncitrus fruit:						
Apples, fresh 2/	0.266	0.256	0.329	0.333	23.7	30.1
Grapes, fresh 2/	--	--	--	--	--	--
Peaches, fresh 2/	--	0.645	--	0.695	--	7.8
Pears, fresh 2/	0.300	0.286	0.179	0.205	-40.3	-28.3
Strawberries, fresh	0.935	0.808	0.944	0.884	1.0	9.4

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

Reduced grapefruit and lemon production across all major-producing States and a smaller California navel orange crop have led to higher grower prices for much of this winter and spring. California is now shifting to its Valencia orange crop, the primary source for fresh-market oranges during the summer. As the California Valencia orange harvest gets fully underway, the smaller summer crop should maintain strong prices for the remainder of the season.

Strong fresh-apple grower prices in Washington State and New York mostly reflect the overall boost in the May 2012 U.S. average fresh-market apple price. Smaller crops in these two major apple-producing States contributed to the higher prices. Tightening supplies as the 2011/12 U.S. apple marketing season winds down are putting upward pressure on domestic fresh apple grower prices for the remainder of the season. As of June 1, the U.S. Apple Association reported 9 percent fewer fresh apple holdings compared to the same time last year. Early indications from the U.S. Apple Association suggest heavy production from Washington State in 2012/13. Washington is typically the source of 70 percent of U.S. fresh-use apples. Thus, a potentially larger crop in that State likely would temper some regional price spikes for fresh apples during the upcoming season, particularly since other U.S. production areas have experienced short crops due to weather problems.

April hailstorms affected the early-peach crop in California, resulting in tighter overall supplies as the season started, driving fresh peach prices higher than a year ago in May. Periods of rain in April also brought California strawberry shipments for the month down 6 percent below last year's April levels and while supply volumes improved in May, robust demand kept the May 2012 average price higher than last year'sprices. However, should supplies continue higher through mid-summer than they were a year ago, year-to-year gains in strawberry prices could diminish in the next couple of months.

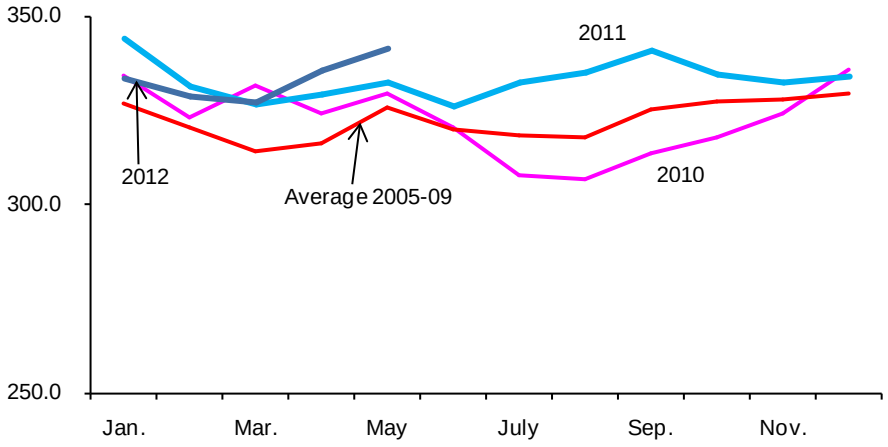
Retail Prices for Fresh Fruit Strengthens

The Consumer Price Index (CPI) for fresh fruit, as reported by the Bureau of Labor Statistics (BLS), moved ahead of a year ago in May on higher retail prices for most fresh fruit. At 341.1 (1982-84=100), the index was up 9 points from the May 2011 index and the highest it has ever been for any May since 1989 (fig. 2). In May 2012 relative to the same time last year, higher prices for navel oranges, grapefruit, lemons, and Thompson seedless grapes more than offset the decline in prices for strawberries, Red Delicious apples, and bananas, boosting the CPI for fresh fruit (table 2).

The higher grower prices for most major citrus fruit (navel oranges, grapefruit, and lemons), partly resulting from smaller domestic crops, are also translating to higher prices to consumers. Retail prices for lemons and Thompson seedless grapes showed the biggest increase in May from the same time a year ago. With summer weather in play and seasonal lemon demand climbing, overall tight supplies due to reduced domestic production are bolstering retail lemon prices. Chile's grape shipments to the United States ended sooner than last year with lower overall volume, limiting retail promotional supplies in May when California's Coachella Valley grape region and Mexico were just starting with light early-season supplies. Industry sources have indicated a potentially larger grape crop in California this year, pointing to increased fresh supplies that will likely put downward pressure on retail grape prices this summer when harvest gets in full swing in the San Joaquin Valley, California's main grape-producing region.

Despite lower supplies from imports, banana retail prices are down slightly in May from the same time last year. Continued lower imports into June, however, as currently reported by AMS shipment data, could provide a boost to banana retail prices during the month. U.S. consumers are also paying less for Red Delicious apples despite remaining fresh apple cold storage supplies running tight close to the end of this season, even for Red delicious apple holdings. The CPI for apples

Figure 2
Consumer Price Index for fresh fruit



Source: U.S. Department of Labor, Bureau of Labor Statistics, http://www.bls.gov/data/home.htm.

continues to run above year-ago levels through May, suggesting higher retail prices for other varieties of apples compared to last year. Although outside the scope of the BLS fruit commodity basket, for example, U.S. retail advertised prices for Gala apples averaged $1.32 per pound in May 2012, compared with $1.30 per pound in May 2011.

Table 2--U.S. monthly retail prices, selected fruit, 2011-12

		2011		2012		2011-12 change	
Commodity	Unit	April	May	April	May	April	May
		--- *Dollars* ---		--- *Dollars* ---		--- *Percent* ---	
Fresh:							
Valencia oranges	Lb.	--	--	--	--	--	--
Navel oranges	Lb.	0.926	0.916	0.910	0.968	-1.7	5.7
Grapefruit	Lb.	0.856	0.984	0.937	1.044	9.5	6.1
Lemons	Lb.	1.544	1.472	1.517	1.596	-1.7	8.4
Red Delicious apples	Lb.	1.345	1.306	1.257	1.294	-6.5	-0.9
Bananas	Lb.	0.621	0.617	0.603	0.599	-2.9	-2.9
Peaches	Lb.	--	--	--	--	--	--
Anjou pears	Lb.	1.478	1.503	1.187	--	-19.7	--
Strawberries 1/	12-oz. pint	1.816	1.677	1.807	1.653	-0.5	-1.4
Thompson seedless grapes	Lb.	2.196	2.828	2.687	3.054	22.4	8.0
Processed:							
Orange juice, concentrate 2/	16-fl. oz.	2.499	2.631	2.781	2.642	11.3	0.4
Wine	liter	11.019	8.395	11.181	8.854	1.5	5.5

-- Insufficient marketing to establish price.
1/ Dry pint.
2/ Data converted from 12-fluid-ounce containers.
Source: U.S. Dept. of Labor, Bureau of Labor Statistics (http://www.bls.gov/data/home.htm).

Early-Season Blueberry Prices Holding Up

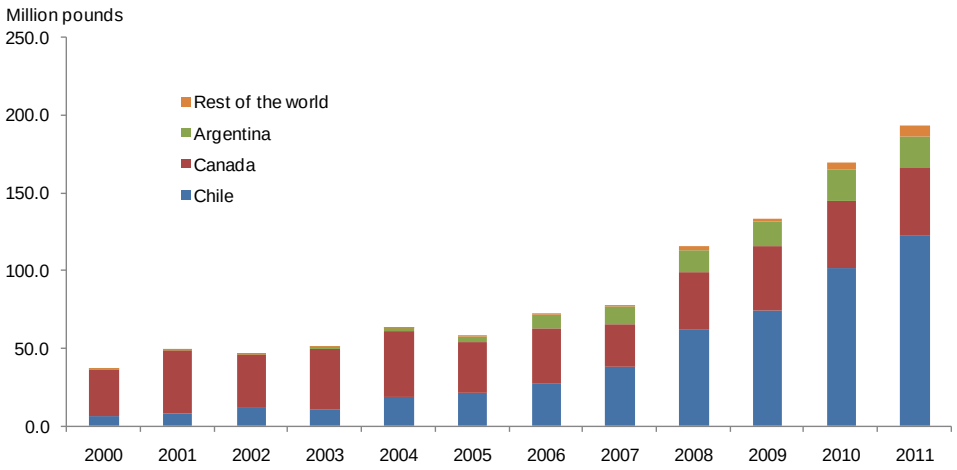
This season's Southern Hemisphere blueberry shipments to the United States (primarily from Chile) have already ended and sourcing has now transitioned to domestic production. Current domestic pricing for fresh blueberries is above last year's, caused by an early finish to Chilean blueberry shipments to the United States this winter and anticipated smaller crops in Florida and Georgia. Those two States are the earliest to come into blueberry season each year.

As of early June, blueberry free-on-board (f.o.b.) shipping-point prices per flat of 12 6-oz. cups with lids (medium-large) were priced at $13-18 in South Georgia and $15-$18 in South and Central District California. At the same time last year, blueberries for the same producing districts were priced at $11-$13 and $13-$15, respectively. Florida produces the first U.S. blueberries for the year typically with market presence up until other producing States enter the market. F.o.b. shipping-point prices for Florida blueberries opened in late March at $28-$32 per flat of 12 6-oz.cup with lids (medium-large), earlier than last year's early April start, averaged $19-$25 (large) in April, and finished at $20-$22 (medium-large) around mid-May. Last year, Florida f.o.b. prices for medium-large blueberries opened at $32-$37, averaged $23-$30 in April, and closed at $12-$13.

A February freeze affected some of Florida's northern blueberry production while a warmer-than-average winter did not provide sufficient chill hours to the State's southern crop. Due to these problems, industry expectations earlier in the season pointed to about a 15-percent decline in Florida's 2012 blueberry crop from a year ago. However, more recent data from AMS indicated this year's cumulative Florida blueberry shipments were down by as much as 32 percent from last year. NASS estimated last year's Florida crop at 21.4 million pounds, an all-time high. While down from the 2011 record, a 15-32 percent production decline this year will still yield a higher than average Florida crop. Generally benefitting from the early-season high-price window for fresh blueberries, Florida's production has expanded over sevenfold in the past decade, aided by both expanding acreage and improvements in average yields per acre.

The same freeze in February that affected Florida's crop also affected the early-season blueberry crop in Georgia. More recent shipments of Georgia blueberries, however, have picked up, with overall shipments for this year through early June up over 30 percent. Spring hail storms in California did not do much damage to the State's blueberry crop; the rains provided the irrigation it needed and recent warm days helped advance the crop. Meanwhile, despite a mild winter, a colder-than-normal spring has delayed crop maturity in the Northwest. As production in California winds down in late June, a late start to the Northwest crop would mean limited west coast supplies during the high-demand summer period, kicking off with the Fourth of July holiday when retailers typically run berry promotions. Western U.S. blueberry prices are likely to strengthen should supplies tighten. Meanwhile, other producing States in the eastern part of the country are coming into production, including New Jersey among the largest producers. Indications are that this year's crop in New Jersey is showing promise of good volume and quality. Should this be realized, there will be plenty of promotable supplies this summer in the eastern part of the country.

Figure 3
U.S. fresh blueberry exports continue to grow



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

The U.S. appetite for fresh blueberries continues to grow, with domestic per capita use reaching a record 1.3 pounds in 2011, more than three times the estimate of a decade ago.

More than half of U.S. blueberries cater to the domestic market but U.S. fresh blueberry exports have been increasing over the past 10 years. With almost consecutive year-to-year increases this past 10 years, the U.S. blueberry industry achieved record-breaking fresh-market export volume in 2011 at 78.5 million pounds, valued at $376 million. Historically, export volume has been mostly to Canada and Chile. Export volume in 2011 relative to the previous year increased 21 percent to Chile but declined 2 percent to Canada. Chile has replaced Canada as the No.1 export destination for U.S. fresh blueberries since 2007, averaging around 60 percent of total export volume in the past 3 years. Though still relatively small in comparison to Chile and Canada, Argentina has emerged as an important market for U.S. blueberries over the past 10 years, with its share of total export volume climbing from a 2-percent average during the early 2000s to around 12 percent in recent years (fig. 3). Mexico and Uruguay are also notable growing markets for U.S. blueberries.

2012 Fresh Peach Supplies Likely Down from A Year Ago

In previous-year June releases of the *Crop Production* report, NASS has provided a current-year three-State peach crop forecast, comprised of production in the top peach-producing States—California, South Carolina, and Georgia. Correspondingly, the initial complete U.S. peach crop forecast was reported in previous-year July releases. Faced with budget cut issues, NASS has eliminated the reporting of the partial and complete U.S. peach production forecast for 2012, and whether or not NASS will reinstate reporting of these forecasts for next year remains uncertain.

Industry expectations are that 2012 peach supplies in the three top States will fall behind volumes produced in 2011. AMS 2012 weekly shipment data support the this year's anticipated lower production, showing overall 2012 domestic shipment volume through the second week of June running 4 percent below the cumulative

volume for the same period last year. Overall shipments to date in California, however, are running about steady from the same time last year, while overall volumes from Georgia and South Carolina are down 9 percent and 7 percent, respectively. Aside from anticipated lower production, these crops are producing good-quality fruit with high sugar levels that could bode well for pricing this year's harvest.

With California shipment volume running 8 percent ahead of last year in early June, California peach supplies appeared to be picking up after being down 13 percent in May from the same time last year. Both California and South Carolina dominated early-season supplies in May, with shipments from the latter down in May and June compared with the same time last year. Shipments from Georgia were higher in May but soon fell behind last year by early June.

Mid-April hailstorms are partly behind the anticipated lower production in California this year. While some California peach growers were more heavily impacted by the hailstorms than others, some fruit loss due to the hailstorms would have occurred anyway during the usual fruit thinning stage. Others also attribute part of the production decline in California to reduced bearing acreage over the last 5 years, the result of removing less performing acreage or switching to other more profitable crops such as citrus, almonds, and walnuts. California is the dominant producer of peaches across the country, accounting for about half of the fresh market crop.

Peach harvest in Georgia started earlier than normal this year as the warmer than normal temperatures this winter accelerated crop maturity. Lack of chill hours this winter, however, could impact the State's overall production. Some of the earlier varieties were producing smaller fruit. Recent growing conditions, however, have been favorable, promoting overall fruit quality, with fruit size improving and producing good color and high sugar levels. As of June 11, the NASS Georgia Field Office reported 51 percent of this year's crop had been harvested, compared with 41 percent the same time last year and 24 percent for the 5-yr average.

In response to the overall tight supplies in May, U.S. grower prices for fresh peaches averaged $0.695 per pound in May, up from the $0.645 per pound average price in May 2011 and 45 percent higher than the previous 5-year average for the month. The higher domestic farm-level prices for fresh peaches in May also translated to higher prices to consumers, with U.S. retail advertised prices for yellow-flesh peaches averaging $2.26 per pound, compared with the May 2011 average of $1.59 per pound. Fresh peach grower prices are expected to decline seasonally in June and into early summer as supplies peak in California and other producing States also enter the market. Anticipated smaller crops in the top three producing States, however, could hold prices strong relative to a year ago through the summer.

Abundant Sweet Cherry Supplies Likely To Drive Down Prices

Harvesting of the 2012 sweet cherry crop in California was in full swing by early June, with total production for the State anticipated to be average in size but larger than last year's below-average crop size of 75,000 tons (or 150 million pounds). Through early June, cumulative 2012 shipments of California fresh cherries were running 4 percent above the same time last year, based on AMS shipment data.

These larger supplies are putting downward pressure on 2012 domestic cherry prices and partly resulting in strong early-season international demand for California cherries. About one-third of this year's California cherry shipments to date (early June) had gone to the export market, with cumulative volume up 70 percent from the same time a year ago.

While prices for earlier varieties held above year-ago levels due to weather-reduced supplies, more predominant late varieties such as the Bing variety are seeing prices below year-ago levels. Early June f.o.b. shipping-point prices for Bing cherries in California ranged from $40-$43 per 18-lb carton (10 row size) and $32-$34 per 18-lb carton (11 row size), compared with $62-$65 and $55-$56, respectively, the same time last year. U.S. retail advertised prices for cherries in May averaged $3.68 per pound, nearly 25 cents less than the May 2011 average price.

Lighter early-season crops in the southern and central portions of California's San Joaquin Valley are likely to be offset by expected increased production in the northern portion of the Valley, barring any weather problems during the remainder of the harvest season. Specifically, production in the Stockton-Linden-Lodi growing area—the State's northern and main sweet cherry production area, is expected larger and of very good quality, much improved from last year when rains at harvest time sharply diminished both quality and crop size. The northern crop was able to escape serious damage from a passing mid-April hailstorm that also brought lots of rain as production was still in the immature fruit stage. Earlier varieties in the south and central San Joaquin Valley were affected more by the hailstorm because they were more advanced in their growth stage at the time of the storm. Among the earlier varieties, May 2012 California f.o.b. prices for a 16-lb bagged carton of Brook cherries were priced at $62-$68 for 10 row size and $55-$58 for 11 row size. Comparatively, California Brook cherries in May 2011 ranged from $52-$58 per 18-lb carton (10 row size) and $45-$46 for same container size (11 row size). On a per pound basis, this year's May f.o.b. prices were about $0.90-$1.0 higher than the same time a year ago. Rain at harvest time is a serious concern among cherry growers because this could easily cause fruit to split open, making fruit unmarketable. If rain does occur at harvest time, prospects of a very good crop one year can be reversed suddenly; the worst case scenario would be a total crop loss.

Plentiful supplies of sweet cherries are also anticipated in the U.S. Northwest (in Washington and Oregon). A good bloom set and favorable weather this growing season are expected to aid crop size. Harvest started in early June with the Chelan variety, which represents a relatively minor share of annual sweet cherry production in the Northwest. Industry sources reported light rains at early harvest, causing concern among growers of the Chelan variety cherries—an early-season variety. In spite of the rains, growers are still looking forward to very good production in the region, especially for the Bing crop and other varieties, as most of the crop was not yet ready for harvest when the rains occurred. Cool weather in early June slowed crop maturity, delaying harvest start. Advertised prices at retail advanced over a year ago in early June but have since returned to below year-ago levels through mid-month. Northwest supplies were picking up by late June, with promotable volume likely extending through July. Should weather remain favorable throughout the region's harvest season, the abundant supplies are likely to continue to drive down domestic cherry prices from a year ago, promoting both domestic and international demand for U.S. cherries.

Estimates for annual U.S. sweet cherry per capita use have exceeded the 1-pound mark per person since 2006 (except in 2008). With support from expanding domestic production, small but increasing off-season imports, and growing consumer awareness of the importance of healthful diets, the trend in domestic sweet cherry per capita use continues to climb.

2012 California Prune Crop Smaller Than Average

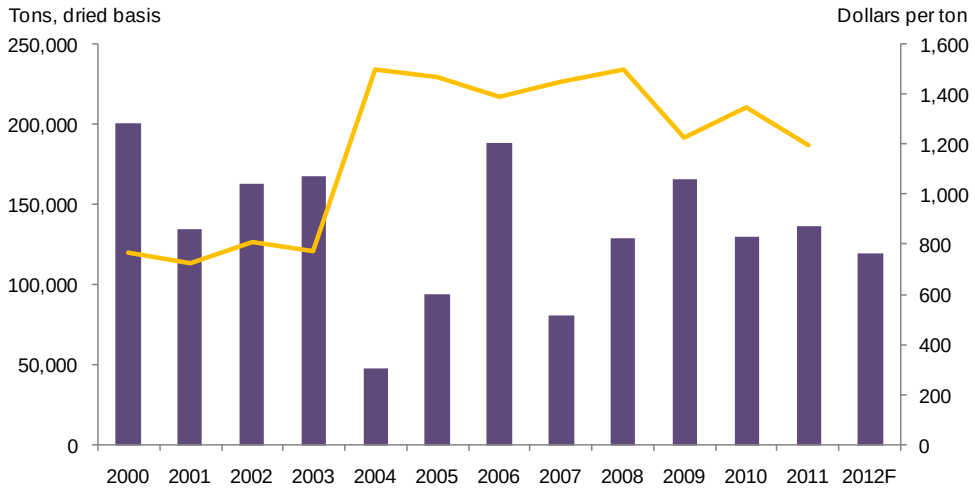
The NASS California Field Office forecast California's 2012 dried plum (prune) crop at 120,000 tons, dried basis, down 12 percent from the 2011 revised estimate of 137,000 tons and 15-percent smaller than the 2008-10 average crop size(fig. 4). In 2007, however, the crop totaled only 83,000 tons and in 2004, even smaller at 48,000 tons. Bearing acreage continues to decline for the third consecutive year in 2012 and the average yield per acre, at 2.18 tons, dried basis, is 8 percent below the yield last year, reducing total crop size. As grower prices in 2009 to 2011 continued to fall below the 2008 average high of $1,500 per ton, dried plum (prune) trees were pulled after the 2011 harvest, reducing bearing acreage in 2012 to 55,000 acres, down 5 percent from a year ago. The 2011 crop was revised up from 130,000 tons to 137,000 tons, 5 percent larger than the 2010 crop. Despite this increase, subsequent price declines (from an average of $1,350 in 2010 to $1,200 in 2011) lowered California's 2011 prune crop value by 6 percent to $164.4 million.

California prune growers produced a good-quality crop this year. Despite hail storms this spring, there were no reports of widespread damage. Blooms came in earlier this year with normal pollination. As the crop progressed through the fruit development stage, trees exhibited normal fruit drop and the lighter-than-average crop will likely aid in fruit sizing. California dominates U.S. prune production with virtually all of its production destined for the processing sector, mostly to dried fruit processors.

As of April 30, 2012, remaining dried prune inventories for the 2011/12 marketing season (August-July) were running 3 percent lower than the same period in 2010/11, based on data from the California Dried Plum Board. With the forecast smaller crop this year, lower carry-in inventories point to a decline in overall prune supplies during the upcoming 2012/13 marketing season, likely driving up new-season prices for California prunes. While the excellent fruit quality of this year's crop is expected to aid demand, reduced overall domestic supplies and likely higher prices could limit U.S. per capita use and exports of prunes.

Over the past 5 years, domestic per capita use averaged 0.30 pound, still below the highs achieved in the 1990s. On the international front, U.S. prune exports in 2011/12, August through April, are running below the volumes exported from the same period in 2010/11, detracting from improving export volume levels the previous two marketing seasons. Among the top 3 export markets for the industry, 2011/12 exports lag to Japan and Germany, but are higher to Canada. Exports are up substantially to other EU countries and to China, South Korea, and Vietnam, but are lackluster to emerging market, Russia.

Figure 4
Forecast California prune production below previous 10-year average



F = forecast.
Source: USDA, California NASS Field Office, *2012 California Dried Plum (Prune) Forecast*, June 2012.

Papaya Supplies Limited

During the past 2 years, U.S. fresh papaya import levels moved against the generally upward trending path it has had since the 1990s and in 2012, January through April, imports continue to show a decline (table 3). Lower imports are mostly attributed to reduced shipment volumes from Mexico, the source for around 75 percent of total annual import volume for fresh papayas in the United States. Belize, Guatemala, Brazil, the Dominican Republic, and Jamaica make up the other leading suppliers and together provide around 24 percent of total import volume.

While weather generally impact papaya supplies in these source countries, U.S. import gains from Mexico in 2011 and this year thus far were hindered by import recalls and rejections associated with problems with salmonella contamination. In 2011, a multi-State salmonella outbreak related to fresh Mexican papaya imports was linked to more than 100 illnesses. More recent recalls and import rejections this year indicate that the salmonella problem still lingers.

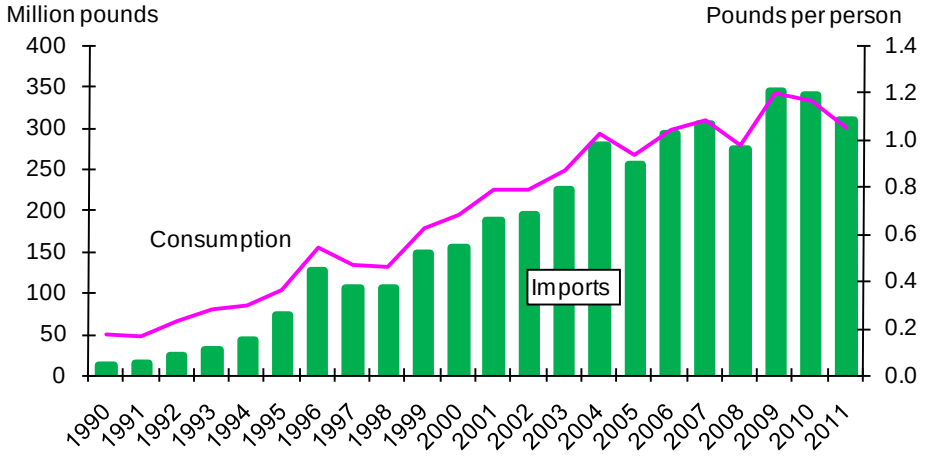
Papaya demand in the United States has been on the rise since the 1990s with heavy reliance on imports (fig. 5). Lower imports from Mexico so far this year, along with also lower shipment volumes from Belize, Brazil, and the Dominican Republic, are limiting supply availability in this market, driving up papaya prices. Terminal market prices for Mexican Maradol type papayas in Philadelphia ranged from around $27-$29 per 30-35-lb carton in January, compared with $26-$28 in January 2011. By May, prices were ranging from $31-$32, up from $23-$25 in May 2011. Although having year-round market presence, Mexican papaya supplies peak in the U.S. market around April and May. More recent import data from the U.S. Department of Commerce, U.S. Census Bureau were not available at the time this report was being prepared, however, AMS shipment data indicated imports from Mexico in May and most of June were down significantly from the same

Table 3--U.S. imports of fresh papayas, by country, 2007-12

Country	2007	2008	2009	2010	2011	Jan.-Apr. 2011	Jan.-Apr. 2012	Change 2011-12
			1,000 pounds					Percent
Mexico	204,210	187,175	275,008	254,003	222,391	86,723	74,718	-14
Belize	73,831	62,104	52,353	62,983	58,141	17,766	12,114	-32
Guatemala	3,396	8,204	4,656	8,559	13,630	4,100	8,225	101
Brazil	9,183	8,363	6,443	6,578	7,897	2,795	1,636	-41
Dominican Republic	11,326	4,722	3,948	4,911	4,773	1,641	1,323	-19
Jamaica	2,186	2,416	1,730	1,664	1,207	246	948	285
Other countries	345	1,171	650	575	91	82	0	-100
World	304,477	274,155	344,789	339,271	308,131	113,353	99,264	-12

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

Figure 5
Fresh papayas: U.S. imports and consumption



Source: U.S. trade data from the U.S. Dept. of Commerce, U.S. Census Bureau; and consumption estimates derived by USDA, Economic Research Service.

period last year. As prices held above year-ago levels, prices further into this season also strengthened due to limited supplies.

Domestic fresh papaya per capita use has declined for two consecutive years due to declining imports. Continued tight supplies and higher prices are likely to dampen prospects, once again, for increased per capita use in 2012, with the estimate likely falling below the 1.0 pound mark.

Mango Imports Slow Into 2012, Boosting Prices

As 2012 moved through the spring season and into early summer, mango imports in the United States through April registered an 8-percent decline from the same time a year ago, providing a boost to domestic mango prices. Although import volume from top rank supplier Mexico during the first 4 months of 2012 posted a 15-percent increase over the same time last year, significant declines from Peru, Guatemala, and Brazil drove overall imports down (table 4).

Domestic production remains miniscule such that the USDA discontinued reporting official annual production data for this fruit since 1998. Supplies in the United

Table 4--U.S. imports of fresh mangoes, by country, 2007-12

Country	2007	2008	2009	2010	2011	Jan.-Apr. 2011	Jan.-Apr. 2012	Change 2011-12
			1,000 pounds					*Percent*
Mexico	406,640	400,335	406,129	475,194	518,420	139,399	160,309	15.0
Peru	64,353	84,296	38,172	70,925	99,609	99,218	52,738	-46.8
Ecuador	68,868	54,404	77,832	56,518	66,942	13,687	18,181	32.8
Brazil	54,405	56,760	51,147	53,711	54,643	1,587	0	-100.0
Guatemala	28,398	32,891	32,421	27,952	39,406	26,452	23,967	-9.4
Haiti	18,531	18,238	19,870	14,226	20,331	5,390	5,376	-0.3
Other countries	9,725	8,902	8,134	8,166	11,055	9,647	12,523	29.8
World	650,919	655,826	633,705	706,691	810,405	295,381	273,094	-7.5

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

States are virtually dependent on imports, with over 60 percent of total volume sourced from Mexico. Only a minute share of U.S. mango supplies move through the export market.

Trade data through April were the most recent available from the U.S. Census Bureau when this report was published, although AMS data show May 2012 import shipments from Mexico also began to fall behind a year ago by 11 percent. Some of this decline could be attributed to the lack of rain during the dry season in some growing areas, affecting the dropping stage of the crop (natural fruit thinning process of trees). But with the rainy season upon them, some in the industry think that fruit-drop rate is just about normal for this season and that the overall crop in Mexico will likely be almost even with last year's crop. Through the second week in June, shipments from Mexico have picked up, moving ahead of the same time last year by 15 percent. So far, overall import shipments from Mexico this year through mid-June are consistent with the projection of steady mango production in that country relative to a year ago.

U.S. imports of Mexican mangoes rose to a record 518.4 million pounds in 2011and, together with bigger volumes from other leading suppliers, drove annual import volume to its highest level last year, totaling 810.4 million pounds. As a result, domestic fresh mango per capita use in 2011 also reached a record high at 2.53 pounds, up from the previous high of 2.23 pounds in 2010.

Based on AMS data, prices for Mexican mangoes in the United States were relatively strong through most of the first half of 2012, despite bigger volumes shipped this year through April. In February, Ataulfo mangoes from Mexico, a yellow variety that is in season during spring/summer, were $8-$9 per 1-layer flat (12s), f.o.b. shipping point crossing through Texas, about the same as in February 2011. While remaining fairly unchanged from a year ago, prices in March dropped to around $6-$8 per 1-layer flat, but gained strength in April through early June around $8-$10 per 1-layer flat, reflecting the overall tight market supplies. Prices in April through June last year ranged from $6-$7. For these same months, prices for Mexico's red varieties that are also in season in the spring/summer such as the Tommy Atkins and Haden were also higher than last year by as much as $1-$2, priced in the range of $4-$6 per 1-layer flat.

Based also on AMS data, average monthly U.S. retail advertised prices for mangoes this year through June ranged from 1 to 22 cents higher than prices last year for the same period, reflecting the tighter supplies to date. January prices averaged $1.13 each, compared with $1.12 in January 2011. The biggest price gain so far was in

February when the average price was $1.18, compared with $0.96 the same time last year. With year-to-year import declines posted in each month through March, the biggest decline by far was in February—down 25 percent from February 2011. Seasonally increasing supplies, however, have driven prices down from earlier in the year. Domestic consumers have seen advertised retail mango prices at less than $1.00 each in May and June, 2-4 cents higher than year-ago levels.

Banana Import Shipments SlowsDuring FirstHalf of 2012

Imports are virtually responsible for fulfilling U.S. demand for fresh bananas, with domestic banana per capita use averaging 25 pounds over the last 5 years. Based on import data from the U.S. Census Bureau, banana supplies in the United States were up 4 percent in volume during the first 4 months into 2012compared with the same months last year (table 5). This increase mostly reflects larger volumes in January and April than year-ago levels. February and March import volumes were down less than 1 percent. More recent AMS weekly banana import shipment information indicate lower overall import volumes in May and through early June, with the magnitude of declines larger than those reported earlier in the year.

Among the United States' leading sources for bananas, increased imports in 2012 through April from Guatemala, Honduras, and Colombia relative to year-ago levels were partly offset by volume declines from Ecuador and Costa Rica due to lingering weather-related supply gaps from last fall. According to AMS data, import shipments from Ecuador and Costa Rica continue to lag significantly through early June. Combined, these two countries supply over 40 percent of total U.S. banana import volume, on average, each year.

Despite increased import volume in January 2012, U.S. banana retail prices averaged $0.604 per pound for the month, compared with $0.596 per pound the same time last year. As February-March supplies were nearly unchanged from year-ago levels, prices inched up a little from earlier in the year for each of those months, but averaged below the same time last. However, relative to the previous 5-year monthly average price, 2012 February and March prices remained strong. The average price in May continued below year-ago levels at $0.599 per pound despite initial information about lower shipments in May relative to the same time last year. With indications of lower overall import volumes through early summer, banana retail prices are likely to remain strong for much of the first half of 2012.

Table 5--U.S. imports of fresh bananas, excluding plantains, by country, 2007-12

Country	2007	2008	2009	2010	2011	Jan.-Apr. 2011	Jan.-Apr. 2012	Change 2011-12
	Million pounds							*Percent*
Guatemala	2,411	2,621	2,452	2,539	2,940	903	1,031	14
Ecuador	2,048	1,830	2,111	2,160	1,938	800	646	-19
Costa Rica	2,286	1,928	1,241	1,841	1,862	633	539	-15
Honduras	1,064	1,115	857	961	982	293	416	42
Colombia	832	994	930	1,016	848	290	320	10
Other countries	186	283	344	509	520	148	226	53
World	8,827	8,770	7,935	9,025	9,089	3,067	3,179	4

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

Slow Start to Pineapple Imports in 2012

Combined U.S. imports of pineapple products (fresh and frozen, canned, and juice) during the first 4 months of 2012 fell 16 percent in volume from the same period a year ago. Imports were down for all three product categories. On a fresh-weight basis for comparison purposes, imports of pineapple juice during this 4-month period was down 27 percent from the same period last year, fresh pineapple down 14 percent, and canned pineapple down 8 percent. On average, fresh (including frozen) pineapples account for the largest share of total annual import volume with around 40 percent, while pineapple juice and canned pineapples make up almost equal shares of around 30 percent.

Reduced U.S. imports of fresh pineapples (includes frozen) in 2012, January through April, are impeding fresh pineapple domestic consumption as imports make up a majority of total fresh pineapple supplies in the U.S. market. U.S. imports to date in 2012 from most leading countries supplying fresh pineapples to this market posted volume declines, including Costa Rica—the No. 1 source with over 80 percent of the annual total on average (table 6). Cool weather and heavy rains in late 2011 hampered pineapple production in Costa Rica, causing January-April shipments to the United States to drop 14-percent below the same time last year. Despite this temporary supply disruption, industry sources indicated that with current improved weather, the pineapple crop in Costa Rica will produce ample promotable fruit this spring and summer. Major import suppliers in Latin America also shipped reduced volumes to the United States in January-April 2012. At the same time, imports from key suppliers in Southeast Asia—the Philippines and Thailand—were higher than a year ago.

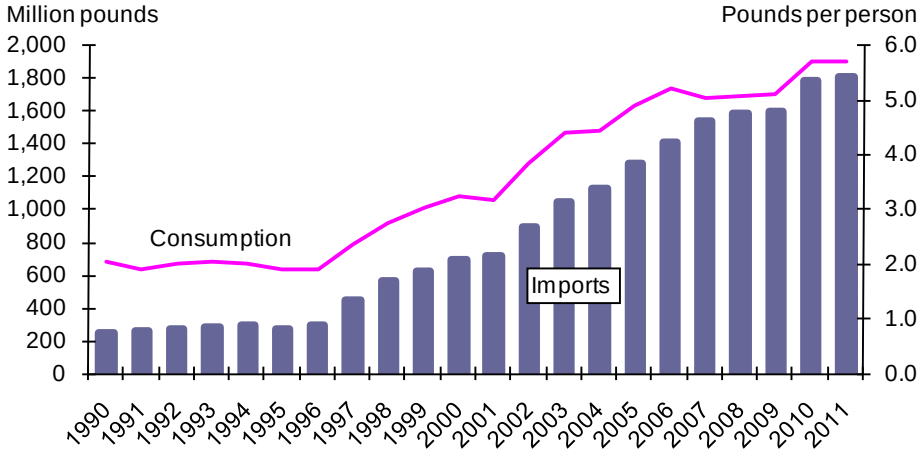
Consecutive year-to-year increases in fresh pineapple imports over the past 16 years helped support the growing demand for fresh pineapples in the United States. Fresh imports increased six folds during this 16-year span, reaching a record 1.8 billion pounds in 2011(fig. 6). Production in Costa Rica recovered from a slow start in 2011 due to cold weather, sending off a total of 1.6 billion pounds to the U.S. market last year, up 3 percent from the previous year and more than making up for big import declines from most of the other major suppliers. Total 2011 imports were up 2 percent from the previous year, providing ample supplies for domestic use. While fluctuating each month throughout the year, U.S. pineapple retail advertised prices in 2011 averaged relatively unchanged from the 2010 average price of $3.00 each, based on AMS data. U.S. fresh pineapple per capita use was estimated at 5.7 pounds in 2011, maintaining the record set the previous year.

Table 6--U.S. imports of fresh and frozen pineapples, by country, 2007-12

Country	2007	2008	2009	2010	2011	Jan.-Apr. 2011	Jan.-Apr. 2012
				1,000 pounds			
Costa Rica	1,280,268	1,302,686	1,312,971	1,508,093	1,555,291	656,536	566,123
Mexico	64,815	86,185	101,933	111,574	80,939	60,331	49,370
Honduras	44,445	49,869	48,648	48,188	60,056	27,917	25,932
Ecuador	74,935	63,728	63,499	54,846	47,813	16,026	12,214
Guatemala	60,562	56,875	40,031	28,075	32,302	12,095	11,906
Panama	17,094	20,448	25,479	35,721	31,113	19,027	12,695
Philippines	7,238	7,468	11,216	12,465	21,121	7,946	9,043
Thailand	7,410	9,151	8,594	9,627	8,187	3,214	3,410
Other countries	2,035	2,301	2,546	4,226	4,735	1,259	2,818
World	1,558,803	1,598,711	1,614,917	1,812,814	1,841,557	804,352	693,512

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

Figure 6
Fresh pineapples: U.S. imports and consumption



Source: U.S. trade data from the U.S. Dept. of Commerce, U.S. Census Bureau; and consumption estimates derived by USDA, Economic Research Service.

Table 7--U.S. imports of canned pineapples, by country, 2007-12

Country	2007	2008	2009	2010	2011	Jan.-Apr. 2011	Jan.-Apr. 2012	Change 2011-12
			1,000 pounds					*Percent*
Thailand	286,192	315,380	348,363	309,359	334,870	112,077	105,085	-6
Philippines	276,527	252,245	216,091	216,908	210,219	67,817	61,106	-10
Indonesia	103,016	119,300	109,788	110,395	131,885	38,953	38,553	-1
China	76,862	75,038	65,195	52,744	40,577	14,219	6,926	-51
Malaysia	24,486	11,059	9,013	9,071	6,067	2,208	2,004	-9
Vietnam	2,675	7,003	1,136	1,333	5,350	704	2,271	223
Other countries	5,084	5,793	4,107	3,068	2,575	1,081	1,419	31
World	774,843	785,818	753,693	702,879	731,542	237,059	217,364	-8

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

Should overall imports return to near or above year-ago levels through the remainder of 2012, current domestic demand levels should be sufficiently met, likely leading to reasonable prices to consumers and an increase in domestic fresh pineapple per capita use. For this year through June, U.S. pineapple retail advertised prices have averaged about 1 percent lower than the same period a year ago.

Lower U.S. imports of canned pineapples during the first 4 monthsof 2012 reflect reduced volumes from top supplying countries, except for Vietnam which registered more than a three-fold increase to date from the same time last year (table 7). The magnitude of declines from major suppliers, Thailand, the Philippines, Indonesia, and Malaysia, ranged from 1 percent to 10 percent, and was much more pronounced from China, down 51 percent. At the same time, juice imports from top Southeast Asian suppliers—the Philippines, Thailand, and Indonesia—were down by as much as 34 percent to 50 percent, outweighing at least a doubling in imports from Costa Rica and Kenya and a very steep rise from Brazil (table 8).

Like in the fresh market, imports mostly supply the demand for these products in the United States. Canned pineapple imports trended slightly up over the last 16 years while pineapple juice imports remained mostly flat, a reflection of domestic demand. Rapid growth in the fresh market is reflected in fresh pineapple imports

Table 8--U.S. imports of pineapple juice, by country, 2007-12

Country	2007	2008	2009	2010	2011	Jan.-Apr. 2011	Jan.-Apr. 2012	Change 2011-12
	---------- 1,000 single-strength gallons----------							Percent
Philippines	35,463	35,609	37,474	34,107	36,681	14,711	9,680	-34
Thailand	19,500	26,418	27,523	19,186	18,866	7,559	4,181	-45
Indonesia	3,539	9,200	9,457	6,351	9,842	2,960	1,492	-50
Costa Rica	4,742	7,142	4,849	4,835	7,321	1,759	4,271	143
Brazil	474	525	458	376	240	1	123	17,855
Kenya	262	2,066	3,170	1,589	231	101	202	100
Other countries	2,344	2,079	1,304	850	658	185	74	-60
World	66,324	83,040	84,234	67,294	73,839	27,277	20,022	-27

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

surpassing those for canned during the past 6 years and those for juice since 2004. Together, pineapples in canned and juice form account for most pineapples available in the United States, on a per capita fresh-weight basis, but Americans are now eating more pineapples in fresh form than in canned and juice separately—a reverse of the situation prior to 6 years ago.

2011/12 Citrus Estimate Down in June Forecast

The June 2012 edition of the NASS *Crop Production* report forecasts the total 2011/12 U.S. citrus crop at 11.57 million tons, down 2 percent from the 2010/11 revised production estimate and down slightly from the previous figure reported in the March *Fruit and Tree Nuts Outlook* report (table 9). A large portion of the year-to-year decrease comes from the decline in Texas and California all oranges, grapefruit, tangerine, and lemon production. Since October, the Texas orange forecast has been adjusted downward to its new low of 50,000 tons for early-tomid-season and navels and 10,000 tons for Valencia's. Small gains were made in Florida navel and Valencia production but nothing to fully offset the year-to-year drop in overall citrus production. Tangerines and mandarin crops are down for all States with Arizona production 33 percent lower than in 2010/11, but California—the largest mandarin/tangerine producer, is only down 1 percent this season. Production of grapefruit is down 9 percent for all states, with the largest single year-to-year decline coming from California's crop, down 21 percent. From March, the grapefruit production estimates have been revised upward by 2 percent. Lemons remain down 12 percent from 2010/11 while compared to the March 2011 forecasts for 2011/12, the production forecast for Arizona lemons was raised upward from 28,000 tons to 32,000 tons, still significantly lower than the 100,000 ton production in 2010/11. The forecast for tangelos remain unchanged from last year.

Florida Orange Crop Up 4 Percent From Last Season

The June forecast for 2011/12 Florida all-orange is up 4 percent from last season, with production gains expected for both early-to mid-season orange crop and Valencia oranges. The early-to mid-season and navel crop was nearing an end to harvest as of mid-June, with only a few processors remaining open through the end of May, according to Florida *NASS Florida Crop Progress and Condition* reports. As of the June *Crop Production* report, Florida Valencia production is anticipated at 3.24 million tons, 3 percent above last season and up 10 percent from 2009/10. Valencia harvest peaked in the second week of April with over 6 million boxes harvested, declining since this point to over 98 percent harvested as of the June 12 Florida NASS *Citrus Production Forecast* report.

Table 9--Citrus: Utilized production, 2009/10, 2010/11 and forecast for 2011/12 1/

Crop and State	Utilized		Forecast for 2011/12	Utilized		Forecast for 2011/12
	2009/10	2010/11	as of 6-2012	2009/10	2010/11	as of 6-2012
	---- *1,000 boxes 2/* ----			----*1,000 tons* ----		
Oranges:						
Early/mid-season and navel:						
California	42,500	48,000	44,000	1,594	1,920	1,760
Florida 3/	68,600	70,300	74,200	3,087	3,164	3,339
Texas	1,360	1,700	1,165	58	72	50
Total 4/	112,460	120,000	119,365	4,739	5,156	5,149
Valencia:						
California	14,000	14,500	14,000	525	580	560
Florida	65,000	70,200	72,000	2,925	3,159	3,240
Texas	275	249	224	12	11	10
Total	79,275	84,949	86,224	3,462	3,750	3,810
All oranges	191,735	204,949	205,589	8,201	8,906	8,959
Grapefruit:						
California	4,200	4,300	3,400	141	172	136
Florida	20,300	19,750	18,800	863	840	799
Texas	5,600	6,300	5,292	224	252	212
All grapefruit	30,100	30,350	27,492	1,228	1,264	1,147
Tangerines and mandarins:						
Arizona	350	300	200	13	12	8
California	9,900	9,900	9,800	371	396	392
Florida	4,450	4,650	4,300	211	221	204
All tangerines and mandarins	14,700	14,850	14,300	595	629	604
Lemons:						
Arizona	2,200	2,500	800	84	100	32
California	20,500	20,500	19,500	779	820	780
All lemons	22,700	23,000	20,300	863	920	812
Tangelos						
Florida	900	1,150	1,150	41	52	52
All citrus	260,135	274,299	268,831	10,928	11,771	11,574

1/ The crop year begins with bloom of the first year shown and ends with completion of the harvest following year.
2/ Net pounds per box: oranges in California (CA)-80 (75 prior to the 2010-2011 crop year), Florida (FL)-90, Texas (TX)-85; grapefruit in CA-80 (67 prior to the 2010-11 crop year), FL-85, TX-80; lemons-80 (76 prior to the 2010-11 crop year); tangelos-90; tangerines and mandarins in AZ and CA-80 (75 prior to the 2010-11 crop year), FL-95.
3/ Includes Temples. 4/ Totals may not be equivalent to the sum of the categories due to rounding.
Source: USDA, National Agricultural Statistics Service, *Crop Production,* various issues.

Florida grower prices for processing oranges have averaged $7.12 per 90-lb box this season-to-date, up 14 percent from last season's average price of $6.26 per box through May (table 10). The average 2012 price through May is 10 percent above the 5-year average price of $6.48 per box. Prices are strong this season due to the increased demand for domestic orange juice that was caused by the carbendazim-fungicide contamination announced by the U.S. Food and Drug Administration in mid-January 2012. This fungicide is not used in U.S. citrus groves and is not present in orange juice made exclusively from U.S. oranges, but can be found in imported orange juice from Brazil and other countries.

Table 10--Processing oranges: Average equivalent on-tree prices received by Florida growers, 2006/07-2011/12

Month	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12
			---Dollars/90-lb box---			
October	4.25	--	0.81	--	--	--
November	5.23	5.16	4.75	3.73	4.74	6.10
December	6.44	5.47	5.10	5.15	5.38	5.84
January	8.55	5.81	5.04	5.99	5.60	6.55
February	9.25	6.10	4.95	6.09	6.20	6.65
March	11.15	6.95	6.31	7.10	6.94	7.48
April	11.45	7.32	6.63	7.90	7.25	8.25
May	11.85	7.39	6.53	8.10	7.70	8.99
June	12.15	7.17	6.87	8.00	8.50	
Oct.-May average	8.52	6.31	5.02	6.29	6.26	7.12

-- = Not available.

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

Florida Orange Juice Production Up with Increased Valencia Forecast

Though Valencia production is forecast up 3 percent this season compared to last year, the estimate has dropped 1percent from the March forecast to 3.24 million tons. The anticipated increase in production has subsequently raised ERS's forecast of orange juice production to 956 million gallons single-strength equivalent (sse), up 4 percent from last season and down less than 1 percent from the March forecast (table 11). This season, NASS forecasts the Florida all-orange yield at 1.63 gallons per box (at 42.0 degrees Brix), unchanged from the March forecast and up 3 percent from last season's final yield of 1.59 gallons per box.

The low beginning stocks have lowered overall domestic supply this season, despite an 8-percent increase in imports from last season. Imports started strong for the first 3 months of the marketing season, surpassing last year's levels for those months but since February imports have been declining, most likely due to the fungicide contamination of imported orange juice made public in mid-January. Even with the decline, Brazil is shipping 9 percent more orange juice through April than in 2010/11 but 33 percent below 2009/10 levels. Overall supply is forecast at 1.65 billion gallons, down 5 percent from 2010/11.

The domestic consumption forecast was lowered this month from March's forecast of 1.05 billion gallons to 1.04 billion gallons, a one percent decline. Nielsen scanner retail sales data show not from concentrate (NFC) retail purchases down 6 percent for this marketing year compared to this time in 2010/11, with total orange juice purchases down 10 percent. The decline in retail purchases can be attributed to the higher total orange juice prices, which are up 7 percent, and overall lower domestic supply. The Florida Department of Citrus (FDOC) has total movement of frozen concentrated orange juice (FCOJ) down 25 percent this season through early June.

U.S. orange juice exports through April are 38 percent lower than 2010/11's, which was the highest export level for at least the past two decades. This season's exports are 5 percent lower than the 5-year export average through April. Due to this and the lower domestic supply, ERS forecasts 2011/12 total orange juice exports to reach 135 million gallons sse, 37 percent lower than 2010/11's record shipment

Table 11 --United States: Orange juice supply and utilization, 1986/87 to present

Season 1/	Beginning stocks	Production	Imports	Supply	Exports	Domestic consumption	Ending stocks	Per capita consumption
	----------Million sse gallons 2/----------							Gallons
1986/87	204	781	396	1,381	73	1,106	201	4.57
1987/88	201	907	296	1,404	90	1,103	212	4.52
1988/89	212	970	272	1,454	73	1,148	233	4.66
1989/90	233	652	350	1,235	90	920	225	3.70
1990/91	225	876	320	1,422	94	1,170	158	4.65
1991/92	158	930	286	1,374	107	1,096	170	4.30
1992/93	170	1,207	324	1,701	114	1,337	249	5.18
1993/94	249	1,133	405	1,787	107	1,320	360	5.04
1994/95	360	1,257	198	1,815	117	1,264	434	4.77
1995/96	434	1,271	261	1,967	119	1,431	417	5.34
1996/97	417	1,437	256	2,110	148	1,398	564	5.16
1997/98	564	1,555	281	2,400	150	1,571	679	5.73
1998/99	679	1,236	350	2,265	147	1,585	534	5.71
1999/2000	534	1,493	339	2,366	146	1,575	645	5.60
2000/01	645	1,389	258	2,292	123	1,471	698	5.18
2001/02	698	1,435	189	2,322	181	1,448	692	5.05
2002/03	692	1,250	291	2,233	103	1,426	705	4.93
2003/04	705	1,467	222	2,393	123	1,448	822	4.96
2004/05	822	974	358	2,153	119	1,411	623	4.79
2005/06	623	986	299	1,909	138	1,312	459	4.41
2006/07	459	889	399	1,747	123	1,248	376	4.15
2007/08	376	1,156	406	1,938	136	1,155	647	3.80
2008/09	647	1,060	317	2,025	125	1,206	594	3.93
2009/10	694	837	328	1,859	147	1,155	557	3.75
2010/11	557	919	265	1,742	214	1,120	407	3.59
2011/12 f/	407	956	286	1,648	135	1,037	477	3.30

f = forecast.
1/ Season begins in October of the first year shown as of 1998/99, prior-year season begins in December.
2/ SSE = single-strength equivalent.
Source: Prepared and calculated by USDA, Economic Research Service.

level. Canada leads as the top destination for U.S. orange juice with 50.4 million gallons sse, up less than a percent from last season though April. Belgium and the Netherlands round out the top three, with shipment volumes to both markets down 58 percent and 86 percent, respectively.

With the smaller overall domestic orange juice supplies and decreased exports, total domestic consumption is forecast to decline 7 percent from the previous season to 1.04 billion gallons. The lower consumption will aid in accumulating stocks. ERS forecasts orange juice ending stocks at 477 million gallons sse, 17 percent above last season, which was the lowest ending stocks since 2006/07. Higher inventories to date from the FDOC support this adjustment.

California Orange Production Projected Down 8 Percent in 2011/12

Like Texas, California's overall orange crop in 2011/12 is projected down 8 percent to 2.32 million tons. Declines in both navel and Valencia crops facilitated the total decline in production, with the navel crop down 8 percent to 1.76 million tons and the Valencia crop down 3 percent to 560,000 tons. The navel crop estimate remains the same from the original October forecast while the Valencia crop has been raised 4 percent. The June issue of NASS's *California Fruit & Nut Review* reported that the navel orange harvest is almost complete while the Valencia harvest continues.

Table 12--Fresh oranges: Average equivalent on-tree prices received by California growers, 2006/07-2011/12

Month	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12
			---Dollars/box--- 1/			
November	9.49	15.27	14.91	17.76	15.32	15.83
December	12.39	10.98	12.07	13.06	13.75	12.93
January	12.39	9.48	14.17	11.56	12.35	10.93
February	24.68	8.28	12.74	10.86	9.65	10.33
March	22.71	8.40	11.58	10.85	8.87	10.06
April	22.74	7.61	10.18	10.68	9.20	13.26
May	21.98	9.28	11.37	13.34	10.63	15.00
June	18.03	11.01	12.43	14.21	11.37	
July	16.83	7.72	10.51	12.60	9.85	
August	14.63	7.72	11.01	9.29	10.95	
September	12.83	10.22	--	9.29	11.25	
October	14.74	10.12	--	9.29	11.15	
Nov.-May average	18.05	9.90	12.43	12.59	11.40	12.62

Source: USDA, National Agricultural Statistics Service, *Agricultural Prices,* various issues.
1/ 75-lb box prior to 2010/11; 80-lb box thereafter.

The smaller crop has elevated grower prices this season (table 12). California fresh orange prices have averaged $12.62 per 80-lb box through May this season, up from $11.40 per 80-lb box over the same period in 2010/11. The overall season-to-date price average is 11 percent above last year with all but one month above 2010/11's prices received.

Bearing acreage continues to decline for California Valencias, down 1,000 acres from 2010/11 to 40,000 acres. Yields are not anticipated to compensate for the smaller bearing acreage, with yields slightly down from 707 fruit per acre in 2010/11 to 700 fruit per acre in 2011/12.

Total fresh orange exports from November through April were 560,473 tons, a 4-percent decline from 583,794 tons reported for the same period in 2010/11 but 9 percent higher than 2009/10 export levels. Over the past 5 years, exports through April account for 72 percent of all exports for the marketing year. Based on the relationship between average year-to-date exports to season-totals, USDA's Economic Research Service (ERS) projects fresh orange exports will be lower than last season exports, with the current forecast at 684,000 tons. This is an increase from the March 2012 forecast due to the stronger trade that occurred in February and March, pushing exports higher than initially expected. South Korea is the leading export destination for fresh oranges with 191,615 tons through April, substantially higher than Canada, the second export market for fresh oranges, with 115,545 tons. Japan rounds out the top three with 79,899 tons for 2011/12.

Total fresh orange imports are up substantially in 2011/12 compared to 2010/11, with 15,319 tons imported through April compared to 10,068 tons during the same period last year. Typically imports through April account for a 5-year average of 21 percent of the marketing year total. Given the lower fresh orange crop, ERS forecasts fresh orange imports to reach 110,000 tons, down slightly from last season's marketing year total of 111,997 tons. This forecast is the same from the March newsletter due to the uneven monthly gains and losses in import volumes. The estimate is conservative, since the bulk of imports are received the last four months of the orange marketing year, when domestic supplies dwindle and the new

season's crop is still developing. Mexico remains the top supplier for fresh oranges through April 2012, with 11,051 tons, 60 percent above the same period in 2010/11. For the same period, Chile has shipped 1,582 tons while South Africa has shipped 1,534 tons.

Overall Grapefruit Production Declines in 2011/12

Total U.S. utilized grapefruit production is forecast at 1.147 million tons in 2011/12, an upward revision of 2 percent from the March newsletter forecast, but 9 percent below the revised 2010/11 crop estimate. The June NASS *Crop Production* report raised the production estimate from February due to minor increases to California, Florida, and Texas production, with Texas's production increasing 6 percent to 212,000 tons but down 16 percent from 2010/11. Florida remains the primary source of U.S. grapefruit, with production forecast up less than 1 percent from the February report but down 5 percent from 2010/11 production. Even with a 3-percent increase from the March newsletter report, California production is forecast down 21 percent from 2010/11's harvest of 172,000 tons. If realized, the 2011/12 U.S. grapefruit crop would be the second lowest in the past thirty years, behind only the 2004/05 crop of 1.107 million tons.

According to data from the Florida Citrus Administrative Committee (FCAC), the Florida grapefruit harvest is complete, with only a fraction of a percent of red grapefruit remaining, as of June 17. Total utilization of all grapefruit was 5 percent behind last year for the same time period. Fresh utilization declined 6 percent compared to 2010/11, while processed utilization was down 4 percent this season compared to last. Though compared to last year, less grapefruit went to processing, as a percent of total grapefruit harvested; 60 percent of this year's crop is estimated to have gone to processing, almost identical to last season according to FCAC figures. The smaller average fruit size and the higher drop rate that has altered the crop forecast earlier in the year, have reduced fresh prices (table 13) but bolstered processed grapefruit prices (table 14). Prices this season (October-May) for fresh grapefruit have averaged $8.74 per box, down 18 percent from last season, while Florida processing grapefruit prices for the same period are up 21 percent, averaging $3.67 per box, the strongest price received in the past 5 years.

Table 13--Fresh grapefruit: Average equivalent on-tree prices received by U.S. growers, 2005/06-2011/12

Month	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12
	----------*Dollars per box 1/*----------					
October	15.15	13.16	11.96	19.80	8.08	12.06
November	12.41	14.01	8.18	13.95	14.80	7.78
December	11.89	11.16	7.89	12.33	10.98	8.13
January	9.95	9.35	7.08	13.56	10.49	7.88
February	8.27	8.26	7.44	12.63	9.20	7.87
March	7.77	7.66	8.00	11.35	9.60	9.41
April	8.08	8.53	8.07	9.03	10.35	11.89
May	10.54	9.44	7.00	7.50	10.44	13.83
Oct.-Feb. average	11.53	11.19	8.51	14.45	10.71	8.74

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

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

Table 14--Processing grapefruit: Average equivalent on-tree prices received by Florida growers, 2006/07-2011/12

Month	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12
			---Dollars per 85-lb box---			
October	-0.97	-2.94	-1.27	-1.65	--	2.14
November	0.18	-0.24	0.13	0.48	2.53	3.40
December	0.95	-0.16	0.18	1.56	2.32	3.37
January	1.22	0.24	0.28	2.35	3.38	3.82
February	1.20	0.67	0.51	2.76	3.91	4.72
March	0.99	0.65	0.65	2.85	3.64	4.77
April	0.77	0.56	0.77	1.73	3.63	3.44
May	0.09	0.45	0.25	0.93	3.30	--
Oct.-Feb. verage	0.52	-0.49	-0.03	1.10	3.04	3.67

-- = Not available.

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

With a smaller grapefruit harvest this year, total domestic consumption of fresh grapefruit is expected to decline to 764 million pounds, down 7 percent from 2010/11, with per capita consumption declining from 2.65 pounds per person to 2.43 pounds per person. Domestic consumption continues to decline, with occasional increases but the overall trend is downward since the peak in 1975/76 with 9.26 pounds per person. Based on year-to-date totals through April and the five-year average of September-April exports as a share of the season's total shipments, ERS projects 2011/12 fresh grapefruit exports to total 455 million pounds. Exports through April were running 9 percent below last season with a total so far of 425.3 million pounds. Usually by this time exports through April represent an average of 94 percent of total marketing season exports. Currently Japan, Canada and France are the top three export destinations for U.S. grapefruit, all of which are receiving lower volumes of grapefruit through April.

With the slight increase in fruit going to processing according to FCAC utilization data, ERS forecasts 2011/12 grapefruit juice production at 78.3 million sse gallons, up 4 percent from the March forecast but still down 7 percent from last season (table 15). The lower production is partially offset by increased imports but the lower beginning stocks will reduce total supply to a forecast 115.2 million sse gallons. Exports are expected to remain similar to last season at 15.5 million sse gallon. Domestic consumption is projected to decline 15 percent to 64.7 million gallons, bringing per capita use to 0.21 gallons. Supporting the forecast, Nielsen retail sales data through mid-May show a 5 percent decline in grapefruit juice sales.

Table 15--Grapefruit juice: Supply and utilization 1991/92-2011/12

Year 1/	Supply					Utilization		
			Beginning		Ending		Consumption	
	Production	Imports	stocks	Total	stocks	Exports	Total	Per capita
	----------	----------	----------	*Million sse gallons*	----------	*1/*----------	----------	*Gallons*
1991/92	120	4	42	165	39	23	104	0.40
1992/93	186	2	39	227	70	22	134	0.52
1993/94	169	1	70	240	59	17	163	0.62
1994/95	191	1	59	251	72	22	157	0.59
1995/96	171	1	72	244	66	27	151	0.56
1996/97	192	0	66	258	86	21	151	0.55
1997/98	166	0	86	252	68	18	167	0.60
1998/99	171	1	68	240	54	24	161	0.58
1999/2000	203	5	54	263	82	33	148	0.52
2000/01	183	1	82	266	75	39	152	0.53
2001/02	179	0	75	255	84	36	135	0.47
2002/03	140	0	84	224	72	38	114	0.39
2003/04	147	0	72	219	65	42	111	0.38
2004/05	49	11	65	126	35	24	67	0.22
2005/06	81	6	35	122	42	19	61	0.21
2006/07	121	1	42	164	58	20	86	0.29
2007/08	109	0	58	167	60	16	92	0.30
2008/09	84	1	60	144	48	16	81	0.26
2009/10	77	1	48	125	45	13	68	0.22
2010/11	84	0	45	129	37	16	77	0.24
2011/12 f/	78	0	37	115	35	15	65	0.21

1/single-strength equivalent. f = forecast.

Source: Prepared by USDA, Economic Research Service.

Smaller Lemon Crop Supports Strong Prices in 2011/12

The 2011/12 lemon crop is forecast at 812,000 tons, down 12 percent from last season and down 2 percent from the five-season annual average of 830,000 tons. California's lemon crop is forecast down to 780,000 tons, from 820,000 tons the previous season. Arizona crop is projected down 68 percent due to a freeze last season during fruit development.

A smaller crop this season has not created substantially higher prices this season to date (Table 16). The season-average price for lemons is $19.11 per 80-lb box through May, 2 percent lower than last season's average for the same period of $19.43 per 80-lb box. The 2011/12 prices were below last season's prices through November before gaining some ground in December. Prices then increased substantially for the early winter months of January and February prior to returning to a modest gain over 2010/11 prices. The slow and steady price increases in the most recent months should be maintained for the remainder of the summer as supplies decline during the traditional high summer demand.

AMS shipment data showed that domestic shipments through mid-June are down 15 percent from last season. Imports are up 27 percent season-to-date (August-April), mostly due to the lower domestic supplies this season. On average, 77 percent of lemons are imported by April but imports can continue to climb as the domestic

Table 16--Fresh lemons: Average equivalent on-tree prices received by U.S. growers, 2006/07-2011/12

Month	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12
			--Dollars per box 1/--			
August	27.01	43.40	35.58	24.26	26.93	25.09
September	31.37	46.10	29.81	27.06	26.23	22.59
October	34.03	47.98	20.15	24.77	25.23	19.57
November	26.55	48.00	17.85	25.37	26.01	19.03
December	18.31	42.66	14.06	22.41	18.78	19.85
January	16.24	45.50	14.24	22.43	14.80	21.35
February	37.31	47.10	11.27	22.27	12.46	18.41
March	37.71	45.90	8.85	21.26	12.87	13.00
April	36.71	43.20	8.68	22.86	14.83	15.36
May	36.11	44.40	11.48	23.36	16.13	16.80
June	38.21	45.90	17.38	23.86	17.93	
July	40.91	43.00	22.78	24.96	22.43	
Aug.-May average	30.14	45.42	17.20	23.61	19.43	19.11

1/ Beginning in 2010/11, boxes are 80 lbs. Prior to 2010/11, box size was 76 lbs.
Source: USDA, National Agricultural Statistics Service, *Agricultural Prices,* various issues.

market reaches the period of peak demand. Mexico remains the United States' top import market for lemons with 58.8 million pounds though April. Chile and Spain make up the remaining top three import markets. Total lemon exports are down 13 percent so far this season. Shipments are down to top export market, Japan, with 58.6 million pounds, a decrease of 3 percent from last season to date. Canada and South Korea are the second and third largest export volume destinations for U.S. lemons.

Tangerine Production Down, Tangelo Production Unchanged in 2011/12

Production for all tangerines and mandarins is forecast at 604,000 tons in 2011/12, 4 percent below the 2010/11 crop of 629,000 tons. Decreases for all producing States contributed to the decline in production with the largest year-to-year decline coming from Arizona with a 33-percent drop in production. Arizona is a relatively small producer when compared to California and Florida production levels, with an anticipated total production of 8,000 tons, while California is at 392,000 tons and Florida is at 204,000 tons. Florida's estimated production is 8 percent below last season. According to Florida NASS *Citrus June Forecast*, harvest of all tangerines is complete for the season. California production is forecast down just one percent. Harvest continues on mandarins/tangerines as of mid-June. National grower prices remained strong for the duration of the tangerine season from October through April, with fresh-on-tree prices remaining above $20.00 per box. The average price for 2011/12 was $21.93 per box slightly above 2010/11 price of $21.60 per box.

Tangelo production is estimated to remain unchanged from last season at 52,000 tons. Tangelos are usually marketed from November through February. The average price for this time period in 2011/12 was $10.59 per 90-lb box (fresh on-tree equivalent), almost double the prices received the previous season.

Almond Crop Projected Down Slightly in 2012

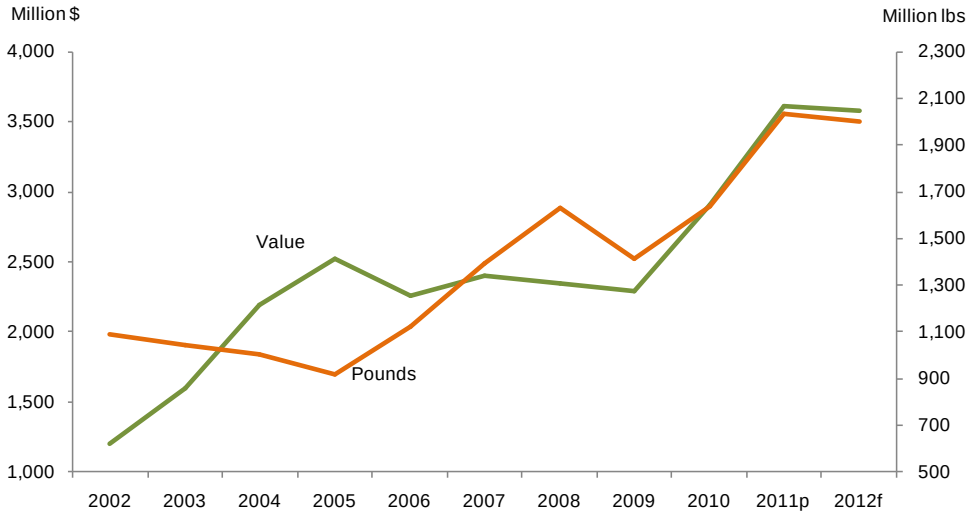
California's 2012 almond forecast pins the upcoming harvest volume at 2 billion pounds (fig.7). If realized, this will be less than 2 percent below last year's recordbreaking harvest of 2.03 billion pounds. Overall bearing acreage for 2012 is estimated at 780,000 acres, 3 percent above 2011's bearing acreage of 760,000 acres. At this estimate, yield per acre is 2,560 pounds per acre, a decline of 4 percent from 2011's yield.

In late April, a hail-producing storm caused some damage in the San Joaquin Valley but overall heavy sets were reported throughout the California almond production region. Insecticides were applied in May to prevent against stink and leaffooted bugs. Nuts began hardening in late May and are setting up heavy sets. As of June, NASS *California Crop Weather* report has the crop progressing well, but some limb breaks due to the heavy crop.

The export market is performing well this year, exceeding last season through April for in-shell almond shipments by 23 percent. The gain in in-shell shipments compensates for the decline in shelled almond exports which are down 12 percent through April. Hong Kong is the leading export market for in-shell U.S. almonds with 134 million pound season-to-date. India and Turkey are the second and third top destinations for in-shell almonds. For U.S. shelled almonds, Spain is the number one destination with 116 million pounds through April 2012, followed by Hong Kong and the United Arab Emirates, with 105 million pounds and 70 million pounds, respectively.

Exports should remain strong for the remainder of the season due to the large inventory currently computed by the Almond Board of California (as of May) which is at 21 percent above last year's inventory for the same period. Overall domestic and international shipments are up this year over last through May 31.

Figure 7
Almond total production and value, 2002-2012*



p = preliminary f = forecast
* = 2012 value calculated using 2011 average price per pound
Source: USDA, NASS, California Almond Subjective Forecast, May 2012

Walnut Acreage Continues To Climb

In late May, California NASS released the walnut acreage estimate for 2011 and has total acreage at 280,000 acres. The bearing acreage is up 3 percent from 2010 at 245,000 acres and 8 percent above 2009's bearing acreage of 227,000. Nonbearing acreage is estimated at 35,000 acres for 2011, an increase from 2009's 28,000 nonbearing acres (nonbearing is estimated bi-annually). The acreage is comprised of mainly the Chandler variety with just under 80,000 acres, representing 32 percent of all bearing acres. Chandler was also the predominant variety for nonbearing acreage, as it is a high quality nut and very fruitful. Hartley is the second-leading walnut variety in California with under 37,000 acres. San Joaquin county holds the largest total walnut acreage with 34,500 acres, followed by Butte county and Tulare county. These three counties account for 37 percent of all walnut acreage in California in 2011.

Also in late May, the European Union (EU) officially acknowledged the heart health benefits of walnuts. In the *Official Journal of the EU*, walnuts were the only nut granted a specific health claim that walnuts contribute to the improvement of blood vessel elasticity (based on daily intake of 30 grams of walnuts). The EU also allowed California walnuts three generic claims to their good fatty acid content, as walnuts are the only nuts providing an excellent source of alpha-linolenic acid, which contributes to the maintenance of normal blood cholesterol levels. The ability to claim these health benefits will enable more health-oriented marketing strategies for the walnut industry. This is especially helpful considering that 70 percent of all U.S. walnuts are exported (based on 2010/11 trade and production figures).

Exports this year are performing weaker compared to last season, mostly attributable to the lower overall domestic crop which was 407 million pounds (marketable production), down 8 percent from 2010/11's marketable production level. In-shell exports are down 15 percent through April 2012 due to lower supplies for export. Turkey is the largest market of in-shell walnuts with 48.4 million pounds season-to-date. Hong Kong has dropped to the second largest market by 30 percent to 48.2 million in-shell pounds. Shelled exports have followed suite and are down 6 percent through April 2012. South Korea is the top destination for shelled walnuts with 19 million pounds, an increase in shipments by 18 percent over 2010/11 for the same period. Japan is the second market, falling slightly from last year's 19.3 million pounds to 18.2 million through April 2012.

Major U.S. Noncitrus Fruit and Tree Nuts Show Gains in Fresh Exports

U.S. fresh fruit exports for the 2011/12 marketing season are holding up strong for major noncitrus fruit crops but are lagging for leading citrus crops, partly due to smaller domestic crops. This season's cumulative exports through April are showing volume gains for apples, grapes, pears, peaches, and strawberries compared with the same period in 2010/11 (table 17). With these increases, season-to-date export values are up for these commodities.

U.S. fresh apple exports this season through April are up nearly 2 percent from the same time the previous season. Shipment volumes to the United States' No. 1 export market for fresh apples—Mexico—is only fractionally higher than the previous season and down to Canada, Hong Kong, and Indonesia who are also leading markets. Strong exports to India, Malaysia, and Vietnam and to several other markets in Latin America, however, reflect much of the growth in fresh apple exports thus far. Since October 2011, the retaliatory import tariffs on several U.S. agricultural commodities, including apples, related to the U.S.-Mexico trucking dispute, had been lifted. However, projected lower fresh-market apple production in the United States in 2011/12, on the basis of a forecast smaller crop in Washington State, a major provider of U.S. fresh-use apples, along with higher domestic fresh apple prices this season, and a slightly bigger apple crop in Mexico, limited this season's U.S. fresh apple export growth to Mexico. Although the lifting of the tariff for U.S. apple exports to Mexico has not resulted in any big export gain for the United States so far this season, it will likely help improve export prospects to Mexico in the upcoming season.

Aided by a bigger domestic crop and lower prices relative to the 2010/11season, U.S. fresh pears have achieved a more robust gain in exports this season, with export volume to date up 25-percent over last season. Export volumes were significantly higher to top U.S. fresh pear export markets, except to Canada (down 1 percent) and Russia (down 34 percent). About 40 percent of exports to date were to Mexico, where shipment volume is up 55 percent.

Despite a smaller fresh-market grape crop in the United States, the U.S. fresh grape industry ended their 2011/12 export season (May-April) strong, with a 6-percent increase in export volume from last season, for an all-time high of 765.4 million pounds. In terms of value, exports also rose to a record $722 million. Accounting for around one fourth of total export volume in 2011/12, Canada remained the No.1 export market for U.S. grapes but U.S. export volume to this market declined 5 percent from last season. This decline was more than offset by substantially higher exports to Mexico, the Philippines, Thailand, and Australia, among historically important markets. Exports also grew to Hong Kong (also a leading market) as well as other markets in East Asia such as China, Taiwan, South Korea, and Japan.

The smaller orange, lemon and grapefruit crops have all contributed to the decline in exports this season through April. Fresh early-to mid-season and Navel orange production is forecast down 1 percent this season, partially explaining the decline in exports. California Valencia production is forecast down 3 percent and might keep export levels of fresh oranges lower than last season. Grapefruit continues to experience decreased production, which in turn has lowered exports this season.

Table 17--U.S. exports of selected fruit and tree nut products

Commodity	Marketing season	Season-to-date (through April) 2011	Season-to-date (through April) 2012	Year-to-date change
		---------- *1,000 pounds* ----------		*Percent*
Fresh-market:				
Oranges	November-October	1,167,588	1,120,945	-4.0
Grapefruit	September-August	464,724	425,292	-8.5
Lemons	August-July	176,756	153,027	-13.4
Apples	August-July	1,462,693	1,485,411	1.6
Grapes	May-April	720,333	765,392	6.3
Pears	July-June	303,910	380,197	25.1
Peaches (including nectarines)	January-December	3,085	8,091	162.2
Strawberries	January-December	90,874	98,828	8.8
Cherries	January-December	273	197	-27.9
		------ *1,000 sse gallons 1/* -------		
Processed:				
Orange juice, frozen concentrate	October-September	75,655	26,853	-64.5
Orange juice, not-from-concentrate	October-September	47,259	48,806	3.3
Grapefruit juice	October-September	7,520	8,674	15.3
Apple juice and cider	August-July	6,741	7,462	10.7
Wine	January-December	34,630	34,422	-0.6
		---------- *1,000 pounds* ----------		
Raisins	August-July	240,462	225,236	-6.3
Canned pears	June-May	17,124	16,929	-1.1
Canned peaches	June-May	44,608	57,891	29.8
Frozen strawberries	January-December	11,385	14,263	25.3
		---------- *1,000 pounds* ----------		
Tree nuts:				
Almonds (shelled basis)	August-July	927,607	1,087,652	17.3
Walnuts (shelled basis)	September-August	258,000	230,968	-10.5
Pecans (shelled basis)	October-September	48,978	53,509	9.3
Pistachios (shelled basis)	September-August	102,372	117,240	14.5

1/ Single-strength equivalent.
Source: U.S. trade data provided by U.S. Department of Commerce, U.S. Census Bureau.

The lemon crop is smaller this year and as summer seasonal demand increases for this fruit, exports should continue to remain below last season.

Current-season exports to date are also showing an improvement over last season for leading tree nut crops, except for walnuts where the export volume is down 11 percent also on grounds of lower production and reduced carry-in stocks at the start of the season. Other tree nuts, on the other hand, had large crops and have ample supply to ship abroad.

Fresh Imports Down for Several Noncitrus Fruit

U.S. fresh fruit imports in 2011/12 through April are down for several noncitrus fruit compared with the same period in 2010/11 (table 18). Season-to-date import volumes are down for apples, grapes, pears, peaches, mangoes, and major melon crops. As for citrus fruit, reduced domestic production for some of the major crops has helped increase demand for imports for this current season, with only tangerine (includes Clementines) import registering a decline.

U.S. imports of fresh oranges, lemons, and limes for this season through April are up substantially. U.S. lemon production is down the most with a 12-percent decline, due to untimely freezes during fruit development in early 2011. Lemon imports are expected to remain strong this season, especially as the peak summer demand season arrives. Commercial lime production in the United States is very limited and therefore, the U.S. market turns to imports to meet the growing domestic demand for this fruit.

U.S. fresh grape imports in 2011/12 totaled 1.17 billion pounds, down 8 percent from 2010/11. While U.S. imports increased from various source countries,

reduced shipments from Chile and Mexico—the United States' top two sources—drove overall imports down this season. AMS data is showing initial 2012/13 shipments from Mexico are running significantly higher than last season, reflecting an early start to the country's grape crop harvest this year. Mexico's production has benefitted from relatively favorable weather this growing season, likely resulting in a sizeable crop that could bring ample supplies to its most important market—the United States—through early this summer.

Despite lower domestic shipments of watermelons and cantaloupes through most of the first half of 2012 compared a year ago, imports this season through April are also down for both melons. Imports are down significantly from major suppliers, Mexico, Costa Rica, and Nicaragua for watermelons and Guatemala, Honduras, Mexico and Costa Rica for cantaloupe.

Orange juice imports are up slightly through April. This increase is due to a very strong start to this season with imports through January up over 35 percent from the previous season, most likely due to low beginning stocks and lower overall orange juice production anticipated at the beginning of the season. Since February, orange juice shipments have been down, almost negating the stronger start to the season.

All tree nut imports are down this season-to-date. The decline in imports could be aided in the strong domestic tree nut production for 2011/12, easing prices for almonds, walnuts, pistachios and pecans. Since nuts are considered substitutable, the ample supply of domestic tree nuts could be being substituted for imported nuts, reducing the overall import levels so far this season.

Table 18--U.S. imports of selected fruit and tree nut products

Commodity	Marketing season	Season-to-date (through April) 2011	Season-to-date (through April) 2012	Year-to-date change
		1,000 pounds		*Percent*
Fresh-market:				
Oranges	November-October	20,135	30,639	52.2
Tangerines (including clementines)	October-September	204,773	170,284	-16.8
Lemons	August-July	79,615	101,350	27.3
Limes	January-December	208,914	282,359	35.2
Apples	August-July	125,725	124,308	-1.1
Grapes	May-April	1,278,937	1,174,453	-8.2
Pears	July-June	123,861	109,477	-11.6
Peaches (including nectarines)	January-December	94,101	79,361	-15.7
Bananas	January-December	3,266,040	3,394,124	3.9
Mangoes	January-December	303,008	280,872	-7.3
Avocados	January-December	348,526	421,742	21.0
Cantaloupe	January-December	771,088	555,716	-27.9
Watermelon	January-December	326,035	257,610	-21.0
		1,000 sse gallons 1/		
Processed:				
Orange juice	October-September	164,333	169,139	2.9
Apple juice and cider	August-July	446,349	309,481	-30.7
Wine	January-December	82,112	99,503	21.2
		1,000 pounds		
Canned pears	June-May	56,036	45,728	-18.4
Canned peaches (including nectarines)	June-May	135,689	109,537	-19.3
Canned pineapple	January-December	235,919	216,506	-8.2
Frozen strawberries	January-December	82,780	110,241	33.2
		1,000 pounds		
Tree nuts:				
Brazil nuts (shelled basis)	January-December	3,021	2,309	-23.6
Cashews (shelled basis)	January-December	81,476	75,604	-7.2
Pine nuts (shelled basis)	January-December	605	231	-61.9
Pecans (shelled basis)	October-September	49,767	49,196	-1.1

1/ Single-strength equivalent.
Source: U.S. trade data provided by U.S. Department of Commerce, U.S. Census Bureau.

Commodity Highlight: Cherries

United States Ranks Second in World Cherry Production

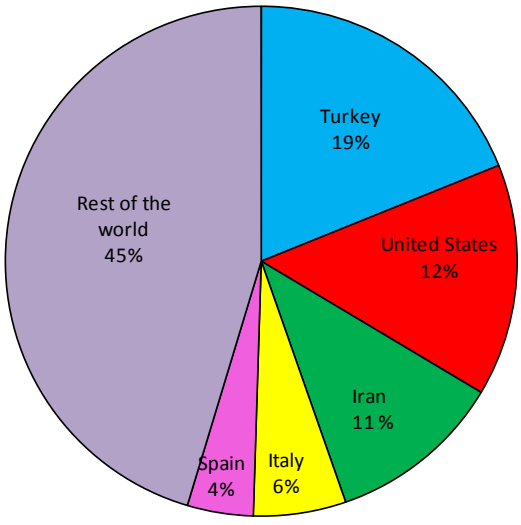
With harvested area and yields well above the world average, the United States is the world's second-largest producer of cherries, after Turkey. Cherry harvested area in the United States ranked second largest in the world during 2006-10, with more than a six-fold lead compared with the world average and producing average yields that were around 77 percent higher than the world average. Rounding out the world's top five cherry producers are Iran, Italy, and Spain. Together, these leading producers grow more than half of the world's cherries (fig.8).

During 2006-10, world cherry production averaged 2.0 million metric tons, up 6 percent from 2000 and up 43 percent from 1990, according to data from the Food and Agriculture Organization of the United Nations. Independently, the United States produced an average of 15 percent of the world's output during the same 5-year period, up slightly from a 12-percent share in 1997-2001.

Sweet Cherries Continue To Dominate Production

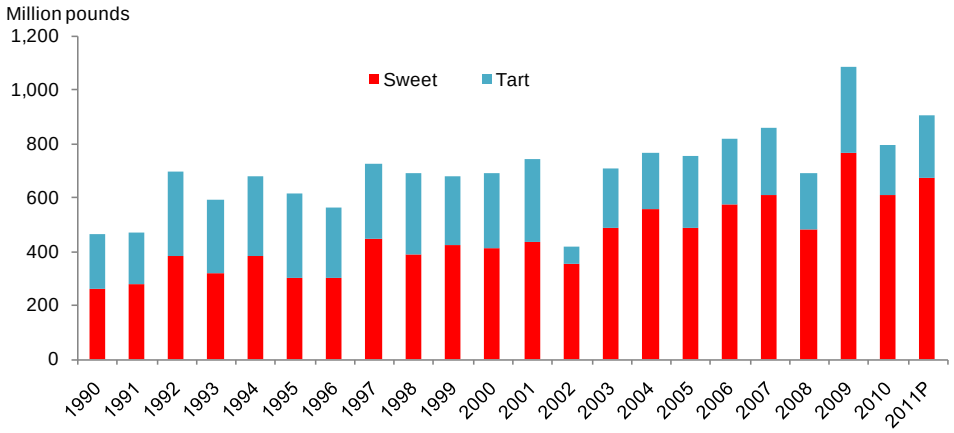
U.S. cherry production changes substantially from year to year, due mostly to weather factors and to some extent, the alternate-bearing tendency of the trees. During 2007-11, the United States produced an average of 456,379 tons (or 912,758 million pounds) of cherries. Over this 5-year span, total utilized production was around 435,355 tons (or 870,710 million pounds). As in years past, sweet cherries continue to account for a majority of production, with its share in the last 5 years averaging nearly three fourths of total utilized production (fig. 9). This share is up from slightly over 50 percent during the 1990s and the early 2000s as domestic production has continued to expand (table 19). Tart cherries, also known

Figure 8
Top five world producers of cherries*



* Average share of 2006-10 world production.
Source: United Nations, Food and Agriculture Organization.

Figure 9
Total utilized cherry production in the United States



P = preliminary.
Source: USDA, National Agricultural Statistics Service, *Noncitrus Fruits and Nuts Summary*, various issues.

Table 19--Cherries, sweet: Production, utilization, and season-average grower price, United States, 1980 to 2011

Year	Production		Utilization		Grower price		
	Total	Utilized	Fresh	Processed	Fresh	Processed	All
	--Short tons--					*--Dollars/ton--*	
1980	173,700	168,300	86,460	81,840	723.00	375.00	554.00
1981	154,540	147,520	71,738	75,782	936.00	447.00	685.00
1982	156,600	134,610	67,610	67,000	969.00	427.00	699.00
1983	181,200	168,765	95,090	73,675	785.00	430.00	630.00
1984	181,800	164,250	90,490	73,760	799.00	377.00	609.00
1985	132,500	126,500	53,040	73,460	1,190.00	515.00	799.00
1986	137,710	136,760	68,320	68,440	1,090.00	552.00	823.00
1987	215,000	213,020	108,140	104,880	953.00	536.00	748.00
1988	186,200	184,510	87,230	97,280	1,100.00	509.00	788.00
1989	193,450	190,930	103,510	87,420	932.00	453.00	713.00
1990	156,730	132,350	70,500	61,850	1,310.00	424.00	894.00
1991	148,550	139,900	66,680	73,220	1,300.00	667.00	968.00
1992	205,000	191,650	95,020	96,630	1,200.00	630.00	915.00
1993	168,350	160,395	79,630	80,765	1,700.00	685.00	1,190.00
1994	207,100	192,720	99,270	93,450	1,480.00	566.00	1,040.00
1995	165,300	152,880	64,230	88,650	2,250.00	551.00	1,260.00
1996	154,100	151,700	80,670	71,030	2,120.00	730.00	1,470.00
1997	225,770	223,490	115,440	108,050	1,680.00	784.00	1,250.00
1998	196,900	193,910	101,960	91,950	1,520.00	635.00	1,100.00
1999	216,120	213,260	123,410	89,850	1,500.00	556.00	1,100.00
2000	207,900	205,420	120,760	84,660	1,900.00	536.00	1,340.00
2001	230,380	219,620	145,710	73,910	1,590.00	527.00	1,230.00
2002	181,355	177,305	126,595	50,710	1,940.00	562.00	1,550.00
2003	245,700	243,580	175,570	68,010	1,700.00	631.00	1,410.00
2004	283,060	279,160	185,050	94,110	2,060.00	597.00	1,570.00
2005	250,830	243,570	167,190	76,380	2,610.00	620.00	1,990.00
2006	294,160	287,520	190,770	96,750	2,130.00	616.00	1,620.00
2007	310,680	306,210	222,560	83,650	2,310.00	527.00	1,820.00
2008	248,060	240,720	175,320	65,400	3,080.00	518.00	2,390.00
2009	442,870	385,625	296,750	88,875	1,600.00	439.00	1,330.00
2010	312,720	307,130	248,340	58,790	2,800.00	453.00	2,350.00
2011P	343,115	338,990	266,320	72,670	3,210.00	511.00	2,630.00

P = prleiminary.
Source: USDA, National Agricultural Statistics Service, *Noncitrus Fruits and Nuts Summary,* various issues.

as "sour cherries," account for the rest of utilized cherry production in the United States. In contrast to sweet cherries, generally declining production since the turn of the 21st century has minimized tart cherry's share of total utilized production (table 20).

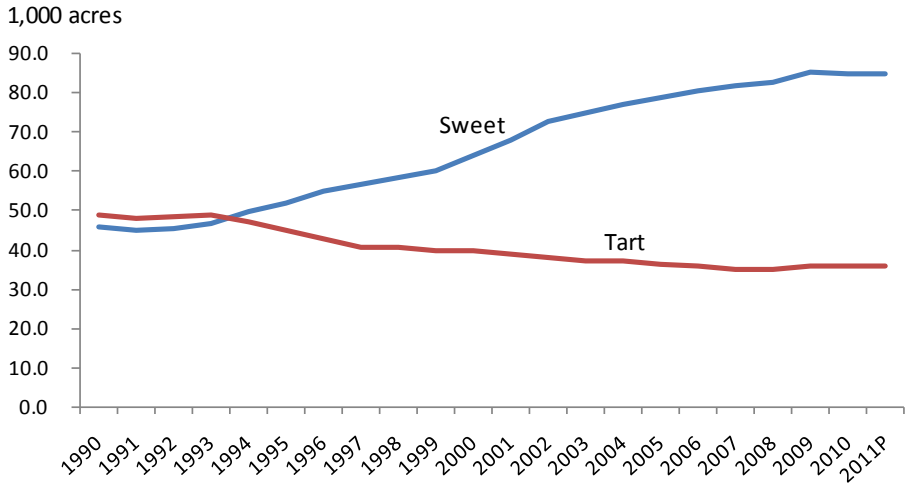
Table 20--Cherries, tart: Production, utilization, and season-average grower price, United States, 1980 to 2011

Year	Production		Utilization		Grower price		
	Total	Utilized	Fresh	Processed	Fresh	Processed	All
	--Million pounds--				--Cents/pound--		
1980	218.1	216.2	6.3	209.9	29.5	19.9	20.2
1981	133.2	132.8	4.0	128.8	42.7	44.5	44.5
1982	310.9	244.9	7.4	237.5	27.6	13.7	14.1
1983	154.6	153.6	5.3	148.3	48.5	46.5	46.6
1984	271.6	255.9	7.9	248.0	44.2	24.4	25.0
1985	286.2	280.2	7.6	272.6	33.4	22.1	22.4
1986	224.1	218.4	5.5	212.9	32.3	20.0	20.3
1987	359.0	286.0	9.1	276.9	23.3	7.3	7.8
1988	236.2	233.5	5.0	228.5	43.9	18.2	18.7
1989	264.1	243.0	6.7	236.3	34.4	14.0	14.5
1990	208.8	202.9	5.1	197.8	38.3	17.6	18.1
1991	189.9	189.7	3.7	186.0	45.9	46.4	46.4
1992	335.1	313.0	8.8	304.2	38.9	17.0	17.6
1993	340.4	273.6	5.3	268.3	39.9	11.6	12.1
1994	304.2	296.3	3.5	292.8	43.6	16.0	16.3
1995	395.6	311.2	2.7	308.5	44.4	5.6	5.9
1996	271.8	260.1	2.5	257.6	48.1	15.7	16.1
1997	292.9	283.3	2.6	280.7	56.3	15.5	15.9
1998	348.1	305.6	2.3	303.3	49.4	14.2	14.5
1999	256.1	254.1	1.8	252.3	56.2	21.6	21.8
2000	288.5	281.4	1.8	279.6	57.5	18.4	18.7
2001	370.1	307.9	1.9	306.0	53.8	18.3	18.6
2002	62.5	62.2	0.8	61.4	84.5	44.3	44.8
2003	226.3	226.3	1.0	225.3	74.4	35.3	35.4
2004	213.0	213.0	1.3	211.7	91.5	32.5	32.8
2005	269.9	267.9	1.2	266.7	89.3	23.5	23.8
2006	262.0	248.6	1.4	247.2	99.0	21.1	21.5
2007	253.2	248.7	1.6	247.1	105.0	26.8	27.3
2008	214.4	213.2	1.0	212.2	139.0	37.2	37.7
2009	359.2	320.8	1.3	319.5	104.0	18.9	19.2
2010	190.4	183.2	0.8	182.4	131.0	21.8	22.2
2011 P	231.7	230.3	0.5	229.8	118.0	29.6	29.8

P = preliminary.
Source: USDA, National Agricultural Statistics Service, *Noncitrus Fruits and Nuts Summary,* various issues.

Figure 10

Sweet cherry bearing acres increasing over the last two decades



P = preliminary.
Source: USDA, National Agricultural Statistics Service, *Noncitrus Fruits and Nuts Summary*, various issues.

Ranked as the eighth most valuable fruit and tree nut crop during 2010, commercial cherry production generated $762 million in U.S. farm cash receipts that year, up from $327 million in 2000. Sweet cherries accounted for 95 percent of this value. Production of both sweet and tart cherries increased during the 1990s relative to the

1980s. This past decade, however, while average yields fluctuated yearly for both sweet and tart cherries, declining bearing acreage for tart cherries hindered production growth (fig.10). In contrast, significant increases in sweet cherry bearing acreage were mostly behind record-high production levels for the U.S. sweet cherry industry in recent years.

Pacific Northwest and Michigan Top U.S. Cherry Production

Requiring a winter dormant period for proper development and fruit production, cherries are not well adapted to most areas of the United States. Commercial production is concentrated in the northern portion of the country where there is sufficient winter cold to get the cherry buds to open properly in the spring. Also, because summers in the southern and central United States are typically long and hot, cherry growers face more pest and disease problems.

Washington, California, and Oregon account for around 90 percent of the commercial U.S. sweet-cherry crop, according to NASS data. Michigan also produces a significant volume of sweet cherries (averaging 7 percent of total U.S. production annually in 2006-11) but is better known for being the country's dominant producer of tart cherries, producing nearly three-quarters of the U.S. tart cherry crop.

The 2007 Census of Agriculture reports that 54 percent of all U.S. farms growing sweet cherries and 86 percent of sweet cherry acreage are housed in the leading Pacific States. Washington alone accounted for 27 percent of U.S. sweet cherry farms and 39 percent of sweet cherry acreage. Meanwhile, Michigan housed 23 percent of U.S. tart cherry farms and 76 percent of tart cherry acreage during 2007. NASS also reports sweet cherry production in Idaho, Montana, New York, and Utah. These four States each account for less than 1 percent of the U.S. sweet cherry crop. Utah is the second-largest tart cherry-producing State, accounting for about one-tenth of total production. Tart cherry production in Washington, New York, Wisconsin, and Pennsylvania ranges from 1 percent to 4 percent of the total crop while Oregon account for less than 1 percent.

Cherries Available in Many Product Forms

In the United States, cherries are consumed in many forms—fresh, frozen, canned, juice, wine, brined, and dried. Approximately three-fourths of the U.S. sweet cherry crop is for fresh use. Those that cannot be effectively marketed during the short harvest season or those that do not meet fresh-grade standards (usually those that are undersized and/or blemished) are processed. Maraschino cherries—the kind most often used in drinks or ice cream sundaes—are made from sweet cherries. Unlike other processed cherries, maraschino cherries also require preservation of good fruit appearance and shape in its final form. Brining is the first step in the maraschino process. Nearly 60 percent of the sweet cherries processed in 2006-11 were brined and used in candies, ice cream, and fruit cakes, as examples. The rest were canned (about 8 percent), frozen, dried, or used for juice.

As the U.S. sweet cherry crop mostly cater to the fresh fruit market, major-producing States have a majority of their production marketed for fresh consumption. In 2006-11, over 80 percent of sweet cherry utilized production in

Washington and California moved through the fresh market, each accounting for more than half and one third of the fresh-market crop, respectively. Previously producing mainly for the processing market, Oregon and Michigan now have a bigger portion of their production going to the fresh market. In 2007-11, fresh-market production accounted for about 70 percent of Oregon's production and more than half of Michigan's crop. Oregon's fresh sweet cherries made up about one-tenth of the U.S. fresh sweet cherry crop but Michigan's only amounted to less than 1 percent.

Very seasonal in nature, fresh-market sweet cherries are marketed from late-April through mid-August. California opens the market each year with shipments running from late-April through June. Shipments from Washington, on the other hand, often begin in June. To minimize any damage to the fruit, all fresh-market sweet cherries are harvested by hand. Processing cherries, on the other hand, are mostly harvested mechanically. Sweet cherries used in making maraschino cherries (mostly from Oregon and Michigan) are also often manually harvested.

The principal market for tart cherries is processing. Similar to sweet cherries, the harvesting of tart cherries is also highly seasonal and runs from June through mid-August. However, because most of these cherries are processed, supplies are available throughout the year. Only less than 1 percent of the U.S. tart cherry crop is for fresh use. The processed products are primarily used in baking and cooking. The frozen product market continues to be the primary outlet for processed U.S. tart cherries. The frozen market has grown in importance to the U.S. tart cherry industry, with 70 percent of the industry's processed production moving through this market in 2007-11, up from about 50 percent in 1999-2001. U.S. tart cherries are also canned or processed into other products such as juice, wine, brined, and dried.

Fresh Account for Growth in U.S. Cherry Demand

Cherries have traditionally been grown and consumed in the United States. They were already popular among U.S. consumers even prior to the 1990s when more emphasis was given to research findings reporting on the health benefits of consuming specific fruit and vegetables—that which have proved helpful in boosting overall fruit and vegetable consumption in the United States. Aside from its versatility and good taste, cherries boast the nutritional value it offers consumers. It is a rich source of antioxidants known to help prevent cancer and heart disease. Cherries also contain compounds that help relieve the pain associated with arthritis, gout, and headaches.

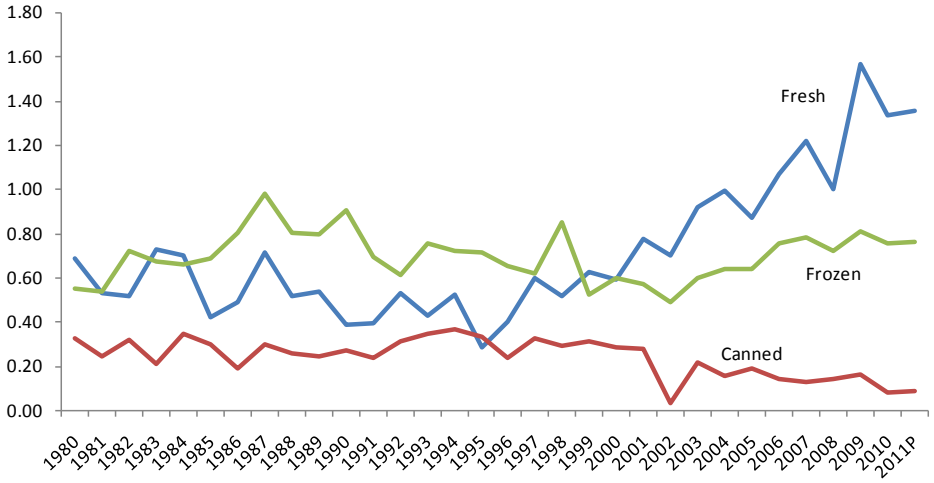
In recent years, Americans consumed an average of 2.0 pounds of fresh and processed cherries annually, up slightlyfrom around 1.5 pounds in the 1980s, 1990s, and early 2000s. Consumption, especially of fresh cherries, varies widely from year to year, due to annual variations in domestic production. Imports of fresh, canned, and frozen cherries do little to help stabilize supplies because they each represent very small volumes relative to what is produced domestically.

During the 1980s and 1990s, Americans consumed more frozen cherries each year than fresh. This trend was reversed this past decade with domestic fresh cherry demand exceeding those for frozen cherries (fig. 11). Domestic fresh cherry per

Figure 11

U.S. fresh cherry per capita use surpasses frozen per capita use

Pounds per person*



* = fresh weight equivalent. P = preliminary.

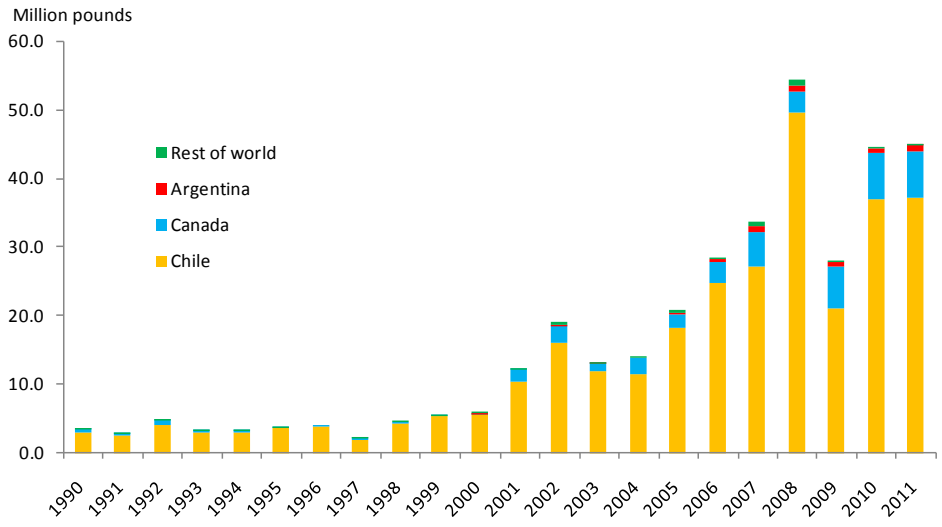
Source: USDA, Economic Research Service calculations.

capita use averaged about 1.0 pound during the first decade of the 2000s, approximately more than half of all cherries (fresh, canned, and frozen, fresh-weight equivalent) consumed per person annually. Frozen cherry per capita use, on the other hand, averaged 0.67 pounds, fresh-weight basis, one-third of total cherries consumed per person for the same period. Canned consumption averaged 0.17 pound per person, fresh weight basis, almost 10 percent of total per capita use. In comparison during the 1990s, fresh use (averaging 0.5 pounds per person) accounted for 32 percent of total per capita cherry use while frozen use (averaging 0.70 pound per person, fresh-weight basis) was around 48 percent. Canned consumption averaged higher at 0.31 pound per person, 21 percent of total per capita use.

Sweet cherries represent nearly all fresh cherries consumed in the United States. Tart cherries continue to dominate frozen and canned cherry per capita use but while its frozen-use share has diminished from about 90 percent during the 1990s to an average of over 75 percent this past decade, its canned-use share increased slightly from over 85 percent to about 90 percent.

Average per capita use of fresh sweet cherries more than doubled during the first 12 years of the new millennium relative to the 1990s. For the same period, average per capita use of frozen cherries declined 4 percent. The upward trend in fresh cherry demand has been made possible by significant increases in domestic supplies, the result of expanding U.S. production and imports. Continued growth in U.S. fresh sweet cherry exports, however, remains a mitigating force in domestic fresh sweet cherry per capita use. Unlike fresh-market cherries, frozen cherries are storable and therefore inventories help to smooth out wide swings in production. In addition, frozen cherry exports are small in volume relative to domestic supplies.

Figure 12
U.S. fresh cherry imports increasing



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

Vast Growth in Fresh Cherry Imports in Recent Decade

While domestic production still constitutes the majority of supplies sold in the U.S. market, fresh-cherry import volume in this market averaged 26 million pounds from 2000-11, up more than sixfold from the 1990s at an average 4-million pounds. Record-high imports at 54.3 million pounds were reported in 2008. Imports grew substantially from Chile, Canada, and Argentina—the top 3 international suppliers of fresh cherries to the United States (fig. 12). Chile remains the primary source, accounting for over 80 percent of U.S. fresh-cherry import volume annually. Canada supplies about 12 percent of total import volume and Argentina about 2 percent. During the 1990s, there were no imports from Argentina. Availability of Southern Hemisphere cherries in the U.S. market run from around November through February—the off-season for domestic production. Vastly increased volume during this period over the last 12 years relative to the 1990s has contributed to the growth in domestic fresh-cherry per capita use. The average import share of total domestic fresh-cherry utilization has risen from 3 percent in the 1990s to 8 percent during 2000-11.

United States Tops World Fresh Cherry Exports

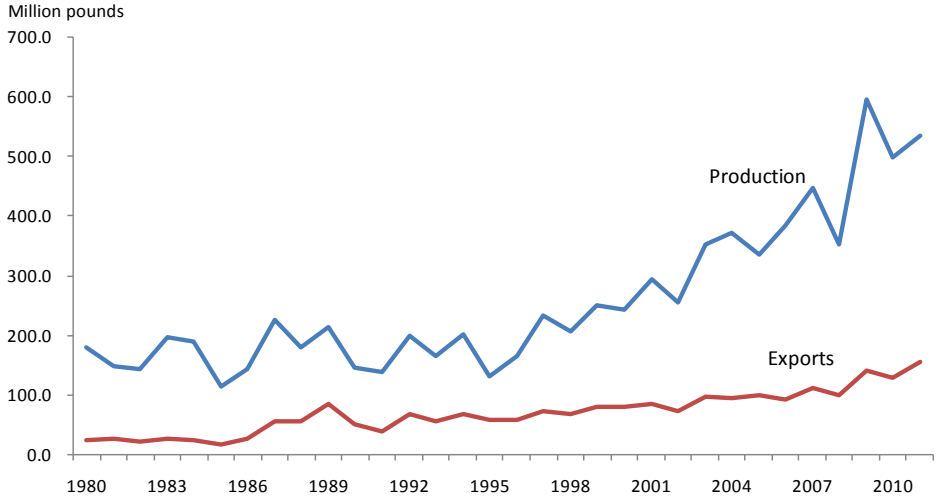
U.S. sweet cherries continue to be competitive in the international market, although the U.S. share of the world cherry market has diminished slightly during the past decade as other major exporters gained ground. The United States maintains its rank as the No. 1 cherry exporter globally, accounting for almost a quarter of the world's average export volume during 2005-09 and around one-third the average of world cherry export value. The United States leads in both volume and value of cherry exports—averaging 117 million pounds in 2005-09 and valued at $261.4 million. In terms of volume, Turkey, Chile, Spain, and Austria complete the top five exporters. Together with the United States, these leading exporters supply approximately 63 percent the world's cherry export volume, generating around 72 percent of total export value, based on data from the United Nations Statistical

Office. Turkey, Chile, and Austria, partly with the aid of expanding production, have seen gains in world cherry export shares at the loss of the United States during the past decade.

As still the top-ranked cherry exporter to the world, technological advances in U.S. production and marketing helped fulfill export demand over time. Due to strong demand overseas and higher export prices relative to domestic prices, U.S. cherry growers, mainly in Washington and California, have relied on foreign markets to absorb around 25 to 35 percent of domestic fresh-market cherry production over the last two decades (fig. 13). U.S. fresh cherry exports have continued to trend up since the 1990s, reaching a record 156.9 million pounds in 2011. Increasing in volume, exports averaged 28 percent of domestic production during the period 2000-11, down from an average of 34 percent during the 1990s. The average per unit export value of U.S. sweet cherries during 2000-09 was consistently higher than that of the world, including leading exporters except Austria in 2008 and Chile in 2009, reflecting premium prices U.S. growers received for the high-quality cherries they marketed internationally.

Canada is now the largest export destination for U.S. fresh cherries, outranking Japan,which dominated this market during the 1990s and most years from 2000-05. More than one-third of total annual U.S. cherry export volume had gone to Canada during the period 2000-11 and slightly over one-quarter to Japan. During the 1990s, these shares were reversed for these two major export markets. Taiwan, Hong Kong, South Korea, China, Australia, and the United Kingdom are also important markets and together receive about one-third of total export volume.

Figure 13
US. cherries: fresh-market production and exports



Source: USDA, National Statistics Service, *Noncitrus fruit and Nuts Summary*, various issues; Trade data from U.S. Department of Commerce, U.S. Census Bureau.

Commodity Highlight: Watermelon 1/

A Brief History of Watermelon

Although the earliest record of cultivation occurred in Egypt 5,000 years ago, watermelons are thought to have originated in Southern Africa. By 1629, cultivation had officially begun in the United States in Massachusetts. While often classified as a vegetable, botanists label it a fruit. Out of the nearly 1,200 varieties currently available worldwide and the 200 to 300 varieties grown in the United States and Mexico, only about 50 varieties have been widely popularized. Major distinctions in varieties arise from differences in pulp color and fruit size, in addition to whether or not the fruit is seedless.

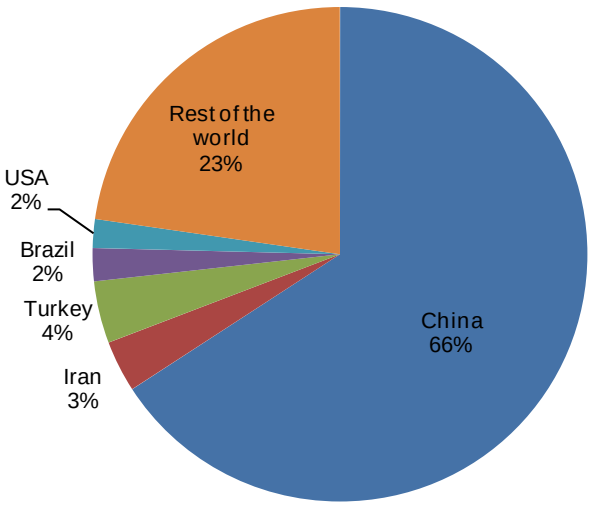
United States Is Among the World's Top Watermelon Producers

China is by far the largest producer of watermelons, growing nearly two-thirds of the world total (fig. 14). Following at a distance are Iran, Turkey, Brazil, and the United States. The United States rank fifth in production, averaging slightly less than 4 billion pounds per year from 2006 to 2010. Between 2006 and 2010, the United States produced 2 percent of the world's watermelons and accounted for 2 percent of the area harvested of watermelon crops on average. During this same period, U.S. watermelon yields were 21 percent higher than the world average.

Domestic Production Continues To Climb

Over the past 10 years, watermelon was consistently the third-most-produced vegetable by weight for the fresh market in the United States, behind onions and head lettuce. Between 1990 and 2010, while the number of acres harvested contracted 35 percent, production rose 29 percent to a record high of 4.1 billion pounds (table 21). Increasing productivity from irrigation and improved varieties helps to explain this discrepancy, as average yield doubled during that time from 15,600 pounds to 31,000pounds per acre. Despite recent gains during the 2010

Figure 14
Top 5 global producers of watermelon*



*Average share of 2006-2010 world production.
Source: United Nations, Food and Agriculture Organization.

1/ Sabrina Correll, Summer Intern, Crops Branch, Market and Trade Economics Division, Economic Research Service.

Table 21--U.S. watermelon, all: Supply and disappearance, farm weight, 1950-2011 1/

Year	Supply			Disappearance			Trade share of:	
	Production	Imports 2/	Total	Exports 2/	Total	Per capita use	Consumption imported	Supply exported
		-- Million pounds --				Lbs/person	- Percent -	
1950s	2,909.2	10.1	2,919.3	12.9	2,906.4	17.7	0.3	0.4
1960s	2,872.3	65.3	2,937.6	86.4	2,851.2	14.9	2.3	3.0
1970s	2,564.7	165.8	2,730.4	91.4	2,639.1	12.3	6.3	3.4
1980s	2,842.0	238.6	3,080.6	61.4	3,019.1	12.7	7.8	2.0
1990s	3,766.4	342.0	4,108.4	216.6	3,891.8	14.7	8.6	5.2
2000	3,749.4	446.0	4,195.4	293.3	3,902.1	13.82	11.4	7.0
2001	4,047.8	483.5	4,531.3	249.4	4,281.9	15.01	11.3	5.5
2002	3,958.5	451.3	4,409.8	364.5	4,045.4	14.04	11.2	8.3
2003	3,832.7	489.2	4,321.9	383.7	3,938.3	13.54	12.4	8.9
2004	3,688.0	546.9	4,234.9	424.0	3,810.9	12.99	14.4	10.0
2005	3,702.3	659.8	4,362.1	349.9	4,012.2	13.55	16.4	8.0
2006	3,986.5	830.5	4,817.0	297.4	4,519.6	15.12	18.4	6.2
2007	3,734.9	902.7	4,637.6	286.0	4,351.6	14.41	20.7	6.2
2008	4,000.3	1,057.1	5,057.4	307.1	4,750.3	15.59	22.3	6.1
2009 r	3,891.1	1,002.6	4,893.7	307.9	4,585.8	14.92	21.9	6.3
2010	4,173.6	988.1	5,161.7	296.1	4,865.6	15.71	20.3	5.7
2011	3,900.5	1,044.2	4,944.7	342.9	4,601.8	14.75	22.7	6.9

r = revised.

1/ Production data from USDA, National Agricultural Statistics Service. Includes any processing uses. From 1982 to 1991, production was estimated by ERS based on available State data adjusted to the national level. 2/ Trade data from U.S. Department of Commerce, U.S. Census Bureau. H.S. import codes=0807113000, 0807114000; export code=0807110000.

Source: USDA, Economic Research Service calculations.

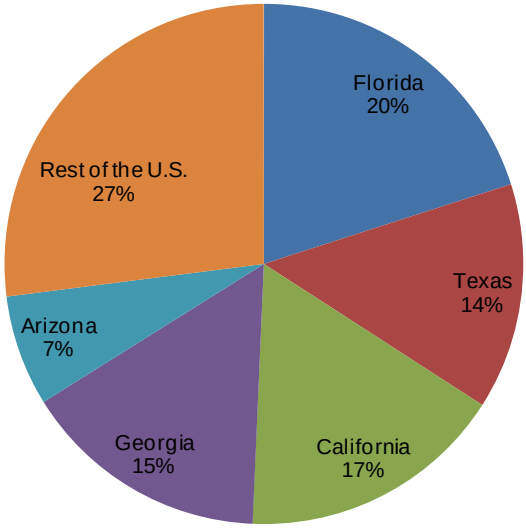
season, the number of acres harvested, yield, and production all returned to near 2009 levels in 2011. However, prices per pound have risen steadily during this period, but consistently behind those for cantaloupe and honeydew. Overall, the value of U.S. watermelon production has remained strong, ending at a record high of 543.8 million in 2011.

Strong Performance of California Watermelon Crop in 2011

In the United States, watermelons are grown all across the country, but require up to a 3-month-long growing season with consistently warm temperatures of 70-90 degrees Fahrenheit. Consequently, most commercial production is limited to the South and Southwest. From 2000-09 (the 2000s), the United States saw overall yields increase an average of 42 percent and acreage decrease an average of 27 percent from the 1990s. Most of the top producing States such as California and Texas have followed the national trend of rising yields and declining acreage over the past decade. On the other hand, Florida recently saw a declining trend in yields coupled with a slight increase in number of acres harvested between 2006 and 2010.

Historically, Florida has been the top producer of watermelons in the country, except for a couple of years when Texas (in 1996) and California (in 1997) surpassed its production. Production in Florida averaged 792 million pounds from 2000-2010. California became the top producer of watermelons again in 2011, producing 780 million pounds, or 20 percent of total U.S. production. Florida and Texas followed close behind with 756 and 525 million pounds, respectively. Georgia and Arizona regularly round out the list of the top five producers; however, a better than average year in Indiana allowed the State to claim the fifth spot in 2011 (fig. 15).

Figure 15
Top five watermelon-producing States*



* Average share of 2007-2011 domestic watermelon production.
Source: USDA, National Agricultural Statistics Service, *Vegetables Summary*.

Export Growth Is Positive but Slowing

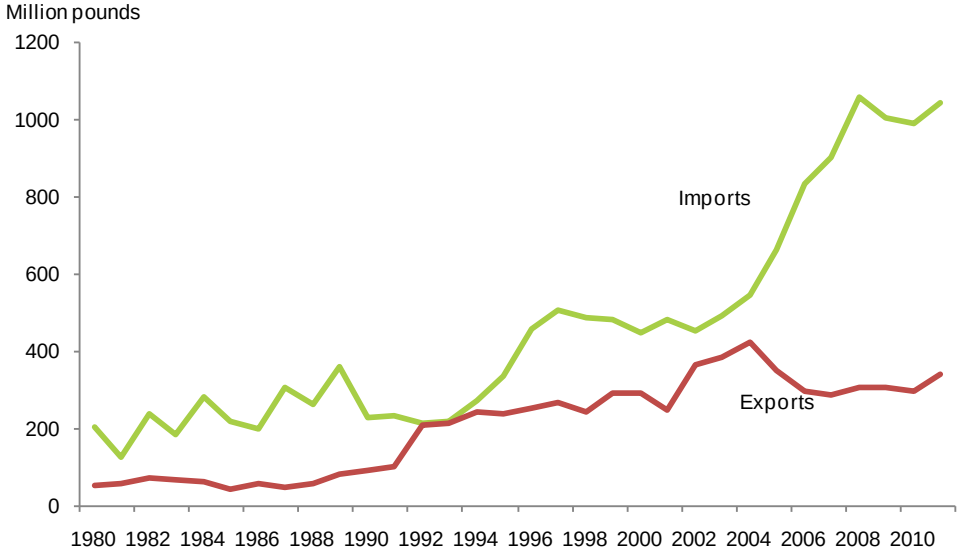
In 2011, export volume totaled 343 million pounds, up 6 percent over the 2000s average and up 58 percent over the 1990s average (fig. 16). Export value shows a similar trend and totaled $84 million in 2011. This was 52 percent higher than the 2000s average and nearly three times higher than average levels in the 1990s. Canada remains the top export destination for U.S. watermelons, receiving over 98 percent of U.S. export volume on average between 2007 and 2011. The next three largest export destinations were Mexico, Japan, and Bermuda, with a combined share of 1.3 percent during those years. Export opportunities for U.S. watermelons appear to be growing in Japan. In recent years, Japan has accounted for less than 1 percent of exports, but volume rose from 280 thousand pounds in 2009 to 5.3 million pounds in 2011.

Imports Are Rising

Although China is the leading producer of watermelons worldwide, the bulk of watermelons imported to the United States come from Mexico, followed by Guatemala and Honduras. U.S. watermelon import volume generally peaks in April and May, mainly from Mexico. Throughout the 2000s, half of the entire annual import volume was imported during these 2 months alone. Although tariff rates are at their highest from April to November, the North American Free Trade Agreement exempts Mexico. Import volumes then tend to diminish significantly from July to September (principal domestic production months) to a fraction of total annual volume.

Overall, however, imports held relatively steady in the 1980s, began growing in the 1990s and took off after 2004. In 2011, import volume was just above 1 billion pounds, over four times greater than import volume in1990 (fig. 16). As domestic production has held relatively steady and domestic consumption has increased, the

Figure 16
U.S. watermelon exports and imports, 1980-2011



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

share of domestic watermelon consumption that is imported has increased, effectively doubling from 11.4 percent in 2000 to 22.7 percent in 2011 (table 21).

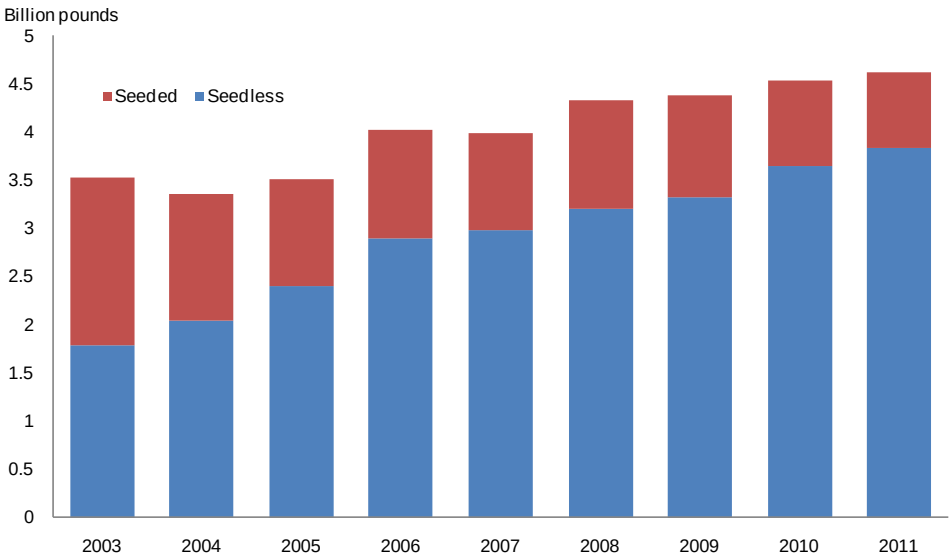
Seedless Varieties Grow in Popularity, Despite Price Premium

Seedless varieties, first developed in 1939, are triploid hybrids. They have become widely available and are in increasing demand. In the past decade, the share of seedless watermelon of total U.S. watermelon shipments jumped from 51 percent in 2003 to 83 percent in 2011 (fig. 17). Seedless varieties are typically started as transplants, rather than directly seeding the field because of their particular vulnerability during germination. This, combined with expensive seed production and a heavier reliance on bee pollination, means seedless varieties tend to be managed more intensively than their seeded counterparts. The differences in production costs are visible at the retail level. From February to September 2011, prices for seedless varieties were on average twice as much as for seeded watermelons. Then again, since the plant does not have to put any energy in the production of viable seed, the flesh is often sweeter, resulting in a more desirable product that is easier to eat.

Expanding Domestic Watermelon Consumption

Watermelon leads per capita use of all U.S. melon crops with a 60-percent share, followed by cantaloupe and honeydew. Total U.S. watermelon disappearance (also known as net domestic use, which serves as a proxy for consumption) in the 2000s averaged 14.3 pounds per person; down 2.5 percent from a decade earlier (table 21). However, from a low in 1980 of 10.7 pounds per person, growth in demand has been positive in the long run. Rising demand for watermelon has been mostly due to the production of varieties that are seedless or are smaller in size combined with increased marketing of pre-cut half or quarter-melons, offering value-added convenience to consumers. With fewer servings per unit purchased, these changes better accommodate the shrinking size of U.S. households.

Figure 17
U.S. watermelon shipments: Seeded and seedless, 2003-2011



*Some imports are not categorized as seeded or seedless and are assumed to be seeded. Seedless were not broken out of imports until 2004. Just as shipments may not cover total volume produced, import shipments may not encompass total imports.
Source: USDA, Agricultural Marketing Service, Market News Service, *Fruit and Vegetable Annual Shipments Summary*.

The nutritious qualities of watermelon may also have a hand in rising demand. As watermelon is 92 percent water, many people eat it to help quench their thirst. Watermelon juice is even now available at some retailers. Lycopene, found in other produce such as tomatoes, is present in watermelon at higher concentrations than any other fruit or vegetable and is believed to reduce the risk for heart disease and some cancers. Watermelon is also a source of vitamins A, B6, and C. Demand for watermelon may rise as U.S. consumers become more health-conscious and seek the benefits of more fruits and vegetables in their diet.

Contacts and Links

Contact Information
Agnes Perez (Noncitrus and tropical fruit), (202) 694-5255, acperez@ers.usda.gov
Kristy Plattner (Citrus and tree nuts), (202) 694-5190, kplattner@ers.usda.gov

Subscription Information
Subscribe to ERS' e-mail notification service at http://www.ers.usda.gov/updates/ to receive timely notification of newsletter availability. Printed copies can be purchased from the National Technical Information Service by calling 1-800-999-6779 (specify the issue number or series SUB-FTS-4036).

Data

The *Fruit and Tree Nuts Situation and Outlook Yearbook* has over 130 tables of annual or monthly time-series data on specific fruit commodities. Data include bearing acreage, production, prices, trade, per capita use, and more. To order a copy, call 1-800-999-6779.

Related Websites

Fruit and Tree Nuts Outlook
http://www.ers.usda.gov/topics/crops/fruit-tree-nuts/market-outlook.aspx

Fruit and Tree Nuts Topic Page
http://www.ers.usda.gov/topics/crops/fruit-tree-nuts.aspx

Organic Farming Topic Page
http://www.ers.usda.gov/topics/natural-resources-environment/organic-agriculture.aspx

Vegetable and Pulses Topic Page
http://www.ers.usda.gov/topics/crops/vegetables-pulses.aspx

E-mail Notification

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

• Receive timely notification (soon after the report is posted on the web) via USDA's Economics, Statistics and Market Information System (which is housed at Cornell University's Mann Library). Go to http://usda.mannlib.cornell.edu/MannUsda/aboutEmailService.do and follow the instructions to receive e-mail notices about ERS, Agricultural Marketing Service, National Agricultural Statistics Service, and World Agricultural Outlook Board products.

• Receive weekly notification (on Friday afternoon) via the ERS website. Go to http://www.ers.usda.gov/Updates/ and follow the instructions to receive notices about ERS outlook reports, Amber Waves magazine, and other reports and data products on specific topics. ERS also offers RSS (really simple syndication) feeds for all ERS products. Go to http://www.ers.usda.gov/rss/ to get started.