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# Fruit and Tree Nuts Outlook

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## California Stone Fruit Supplies Adequate, U.S. Tropical Fruit Supplies Mixed

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The next release is  
July 23, 2002  
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Approved by the  
World Agricultural  
Outlook Board.

The index of prices received by growers during the first 4 months of 2002 averaged lower than the past 2 years, reflecting lower prices for pears, strawberries, and grapefruit. Weaker prices for fresh-market oranges and lemons this past April compared with April 2001 also drove down the index from the previous year. In the meantime, the January-March Consumer Price Index (CPI) for fresh fruit averaged 4 percent higher than the same period a year ago. The CPI was higher for citrus fruit, bananas, and apples.

Early indications point to adequate supplies of California stone fruit (peaches, nectarines, and plums) in 2002. Because California produces the bulk of the Nation's peaches, nectarines, and plums, the larger production in the State this year could force U.S. stone fruit prices down this summer compared with last year.

In 2002, imports of bananas and papayas are lower than a year ago thus far, while imports of pineapples and mangoes are higher. Because imports make up the bulk of domestic supplies for these tropical fruit, per capita consumption for each of these tropical fruit in 2002 is expected to closely mirror the trend in imports.

With the 2001/02 marketing season currently underway, U.S. fresh-market exports of apples, oranges, grapefruit, lemons, and strawberries are short of last season's volume thus far. Early indications of increased production of peaches, nectarines, and plums during 2002 could likely result in higher exports this year, especially during the summer months when the stone fruit season gets underway. Meanwhile, most tree nut exports are up so far during the 2001/02 marketing season as domestic supplies receive a boost from the larger crops of almonds and walnuts and continued large inventories of pistachios.

U.S. imports are down so far this season for a number of fresh-market fruit, but the largest declines are for limes and tangerines.

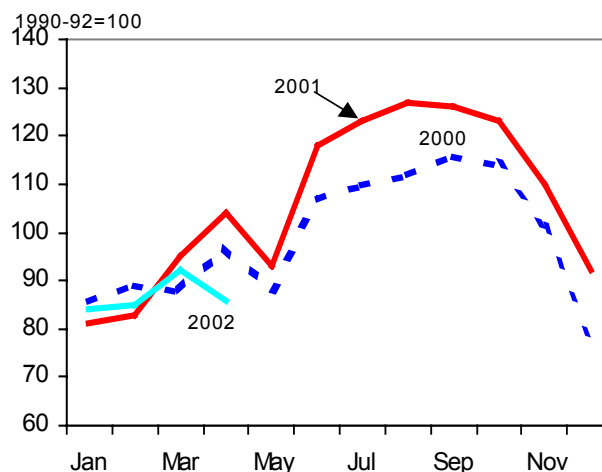
## Price Outlook

### Fruit Prices Weaken

The index of prices received by growers for fruit and nuts during the first 4 months of 2002 averaged lower than the past 2 years (fig. 1). Prices for pears, strawberries, and grapefruit averaged lower during this 4-month period due to increased production. Lower pear prices were also influenced by increased imports, particularly from Argentina, the largest supplier to the U.S. market. Despite reduced production, the devaluation of the peso in Argentina has made it more attractive for their growers to export more pears than to sell in the domestic market.

Although remaining strong through most of the 2001/02 marketing season thus far, weaker prices for fresh-market oranges and lemons this past April compared with the same period a year ago also drove down the index from the previous year (table 1). Both the 2001/02 U.S. lemon crop and California navel orange crop are forecast smaller than a season ago, pushing overall fresh-market lemon and orange prices higher so far this season. Harvesting of the California Valencia orange crop is already underway and is forecast 10 percent larger. Also serving most of the fresh orange market, this larger Valencia crop will likely push fresh-market orange prices lower in the coming months. Grower fruit prices will likely

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



Source: National Agricultural Statistics Service, USDA.

continue lower through the remainder of the first half of 2002 as prices for pears, strawberries, grapefruit, and fresh-market oranges continue lower. However, along with the rest of the marketing season, prices for apples, and this year's early-season prices for grapes, are likely to come out stronger than a year ago, providing some upward push on grower fruit prices. The 2002/03 grape season is anticipated to start out slow as freezing temperatures in early March caused

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

Commodity	2001		2002		2001-02 Change	
	Mar.	Apr.	Mar.	Apr.	Mar.	Apr.
	---- Dollars per box ----				Percent	
Citrus fruit: 1/						
Grapefruit, all	1.66	1.41	1.23	1.02	-25.9	-27.7
Grapefruit, fresh	4.76	4.98	3.19	3.27	-33.0	-34.3
Lemons, all	1.28	3.65	5.74	5.19	348.4	42.2
Lemons, fresh	8.59	13.40	12.08	13.33	40.6	-0.5
Oranges, all	4.54	4.71	4.88	4.30	7.5	-8.7
Oranges, fresh	9.22	10.21	10.01	8.84	8.6	-13.4
Noncitrus fruit:	---- Dollars per pound ----					
Apples, fresh 2/	0.146	0.157	0.210	0.215	43.8	36.9
Grapes, fresh 2/	--	--	--	--	--	--
Peaches, fresh 2/	--	--	--	--	--	--
Pears, fresh 2/	0.148	0.169	0.134	0.134	-9.5	-20.8
Strawberries, fresh	0.811	0.757	0.873	0.627	7.6	-17.2

1/ Equivalent on-tree price.

2/ Equivalent packinghouse-door returns for CA, NY (apples only), OR (pears only), and

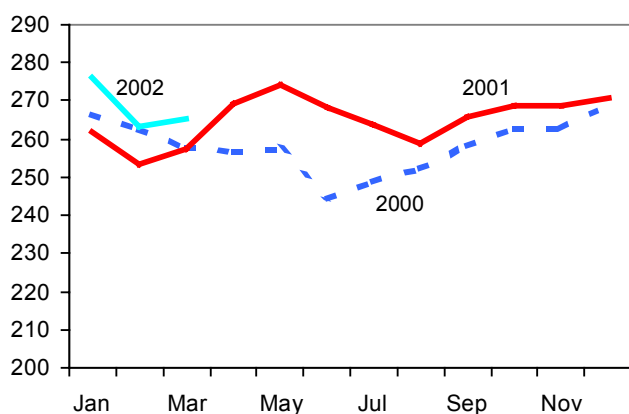
WA (apples, peaches, and pears). Prices as sold for other States.

Source: National Agricultural Statistics Service, USDA.

Figure 2

**Consumer Price Index for fresh fruit**

1982-84=100



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

some crop damage in California's Coachella Valley, the region that begins the State's grape season each year with marketings during the spring. Some grape-growing areas in Sonora, Mexico, where a portion of the production is shipped to the U.S. market, were also affected by the freeze.

The January-March Consumer Price Index (CPI) for fresh fruit averaged 4 percent higher than the same period a year ago (fig. 2). The CPI was higher for citrus fruit, bananas, and apples. For the same period, the CPI for canned fruit also averaged higher and was up 3 percent. Except for strawberries, retail prices were higher for all fruit and fruit products that are reported by the U.S. Department of Labor's Bureau of Labor Statistics (table 2). Although current year fresh strawberry shipments from Florida were down slightly from a year ago, since January 50 percent more fresh shipments from California and over 25 percent more imports, mainly from Mexico, have led to cheaper strawberries for consumers. Higher prices for navel oranges and lemons reflected strong market demand and smaller crops. Apple and pear prices also held higher. Banana prices are holding up strong given fewer supplies imported. Though grape imports from Chile are expected to be larger this season than the past year, prices for Thompson seedless grapes in January through March were higher because imports were slow to begin with early in the season. Prices for frozen concentrated orange juice (FCOJ) were up only slightly as retail demand for FCOJ continues to decline.

Table 2--U.S. monthly retail prices, selected fruit, 2001-2002

Commodity	Unit	2001		2002		2001/2002 Change	
		Feb.	Mar.	Feb.	Mar.	Feb.	Mar.
<b>Fresh:</b>							
Valencia oranges	Lb	--	--	--	--	--	--
Navel oranges	Lb	0.660	0.646	0.759	0.710	15.0	9.9
Grapefruit	Lb	0.583	0.571	0.612	0.597	5.0	4.6
Lemons	Lb	1.138	1.081	1.270	1.151	11.6	6.5
Red Delicious apples	Lb	0.830	0.845	0.892	0.915	7.5	8.3
Bananas	Lb	0.496	0.510	0.504	0.519	1.6	1.8
Peaches	Lb	1.774	--	--	--	--	--
Anjou pears	Lb	0.950	0.950	0.998	0.971	5.1	2.2
Strawberries 1/	12-oz pint	2.140	2.010	2.137	1.941	-0.1	-3.4
Thompson seedless grapes	Lb	1.647	1.616	1.752	1.662	6.4	2.8
<b>Processed:</b>							
Orange juice, concentrate 2/	16-fl. oz	1.909	1.808	1.937	1.870	1.5	3.4
Wine	liter	5.400	5.594	6.039	6.236	11.8	11.5

-- Insufficient marketing to establish price.

1/ Dry pint.

2/ Data converted from 12 fluid ounce containers.

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

## Fruit Outlook

### California Stone Fruit Orchards Likely To Produce Adequate Supplies in 2002

Early indications point to adequate supplies of California stone fruit (peaches, nectarines, and plums) in 2002. This winter, California stone fruit orchards received a total of 976 chill hours (when temperatures remain below 45 degrees Fahrenheit), much less than last year's 1,243 chill hours and the average of 1,146 chill hours required for achieving full dormancy, an essential stage for the development of strong fruit. However, according to the California Tree Fruit Agreement (CTFA), a grower-funded organization that promotes fresh-market stone fruit, the short bloom period this year, lasting only 7 to 8 days, was an indication that the amount of chill hours this winter was sufficient for the orchards. Normally, orchards that received insufficient chill hours end up with a very long bloom period.

The winter started off with warmer than normal temperatures in November and December 2001, with total chill hours reaching only 422 hours at the end of the year. Colder temperatures in January and February raised total chill hours and delayed bloom by about 2 weeks. The trees, starting off with early variety nectarines, followed by plums and then peaches, began to bloom around the first week of February and by mid-month small fruit started to develop. Fruit set was not as heavy as last year but adequate, according to CTFA. The lighter fruit set actually provided growers with some savings on thinning cost.

Even with the lighter fruit set, production in 2002 is anticipated to be larger than last year. The reason is that last year's production was damaged by hail. Last year's peach crop received only a small amount of hail damage (the fuzzy skin of peaches provides some

Table 3--Peaches: Production, utilization, and season-average grower price, California

Year	Production 1/	Utilization		Grower price	
		Fresh	Processed	Fresh	Processed 2/
		--Million pounds--		--Dollars/pound--	
1990	1,555	384	1,171	0.22	214.00
1991	1,597	402	1,195	0.16	218.00
1992	1,759	430	1,329	0.14	215.00
1993	1,640	386	1,254	0.19	218.00
1994	1,717	440	1,277	0.12	180.00
1995	1,323	323	1,000	0.24	213.00
1996	1,715	459	1,256	0.28	219.00
1997	1,839	498	1,341	0.14	260.00
1998	1,712	432	1,280	0.20	219.00
1999	1,792	508	1,284	0.20	225.00
2000	1,808	538	1,270	0.19	250.00
2001	1,675	536	1,139	0.21	244.00

1/ Utilized production. 2/ Prices are only for clingstones which represents over 80 percent of all California peaches processed.

Source: National Agricultural Statistics Service, USDA.

Table 4--Nectarines: Production, utilization, and season-average grower price, California

Year	Production 1/	Utilization		Grower price	
		Fresh	Processed	Fresh	Processed
		--Short tons--		--Dollars/ton--	
1990	232,000	229,500	2,500	2/	2/
1991	215,000	211,000	4,000	2/	2/
1992	236,000	233,000	3,000	2/	2/
1993	205,000	201,000	4,000	2/	2/
1994	242,000	238,000	4,000	2/	2/
1995	176,000	170,000	6,000	2/	2/
1996	247,000	239,800	7,200	2/	2/
1997	264,000	258,500	5,500	2/	2/
1998	224,000	207,600	16,400	2/	2/
1999	274,000	256,300	17,700	437.00	27.90
2000	267,000	260,700	6,300	407.00	24.00
2001	275,000	265,400	9,600	480.00	26.00

1/ Production all utilized. 2/ Not published to avoid disclosure of individual operations.

Source: National Agricultural Statistics Service, USDA.

Table 5--Plums--Production, season-average grower price, and value, California

Year	Utilized production	Grower price	Value
	Short tons	Dollars/ton	1,000 dollars
1990	223,000	603.00	134,412
1991	218,000	449.00	97,894
1992	250,000	252.00	63,033
1993	185,000	508.00	93,954
1994	247,000	321.00	79,358
1995	124,000	950.00	117,849
1996	228,000	420.00	95,831
1997	246,000	312.00	76,825
1998	188,000	529.00	99,388
1999	196,000	419.00	82,041
2000	197,000	442.00	87,115
2001	210,000	316.00	66,443

Source: National Agricultural Statistics Service, USDA.

protection against bruising) while about 15 percent of the nectarine and plum crops were damaged. The U.S. Department of Agriculture's (USDA) estimates of the 2001 nectarine and plum crops in California, however, were 3 percent and 7 percent larger than in 2000 (tables 4 and 5), while the peach crop was 7 percent smaller (table 3). This year, fruit are developing later than normal thus far, but the stone fruit crops managed to escape from any major hailstorms. USDA forecasts total production of peaches in California (both freestone and cling varieties) to increase 6 percent to 1.8 billion pounds in 2002. Production for both California nectarines and plums in 2002 will not be available until January 2003.

There is concern about possible water shortages in California's stone fruit growing region, especially into the summer. Rainfall is still below normal. Water deliveries began May 1<sup>st</sup>, 10 days earlier than last year, and are scheduled to last for only 3 months. After this 3-month period, surface water will be terminated and growers would have to pump water for irrigation. Fortunately, most of the orchards are equipped with water pumps and wells.

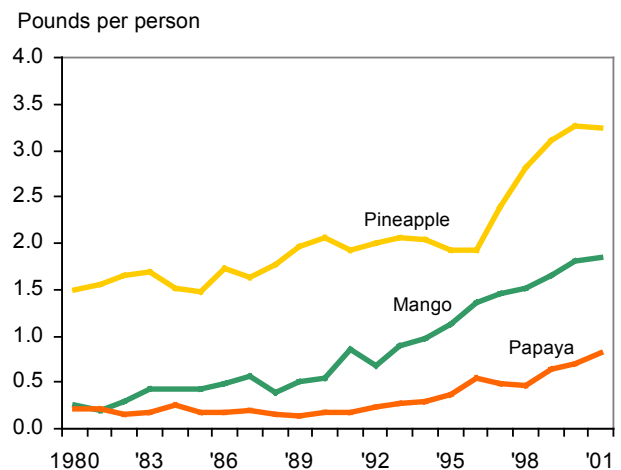
Because California produces the bulk of the Nation's peaches, nectarines, and plums, the larger production in the State this year could force U.S. stone fruit prices down this summer compared with last year. What could help ease some of the downward pressure on prices is if the export market remains strong similar to last year. U.S. exports of fresh peaches (including nectarines) in 2001 were up 15 percent from the previous year, with increased shipments to the five leading markets—Canada, Taiwan, Mexico,

Hong Kong, and the United Kingdom. Exports to Japan, however, fell 53 percent. When Japan opened its market to U.S. fresh nectarines 2 years ago, it was already late in the U.S. marketing season, leaving only a small volume of fresh nectarines available for export. U.S. exporters were more optimistic last year as the Japanese market opened earlier. However, exports remained low because U.S. nectarines, a relatively new product for Japanese consumers, had to compete with the large production in Japan last year of white flesh peaches sold at low prices. U.S. fresh plum exports last year were up to most major markets, boosting the total volume shipped by 3 percent.

### Tropical Fruit Outlook

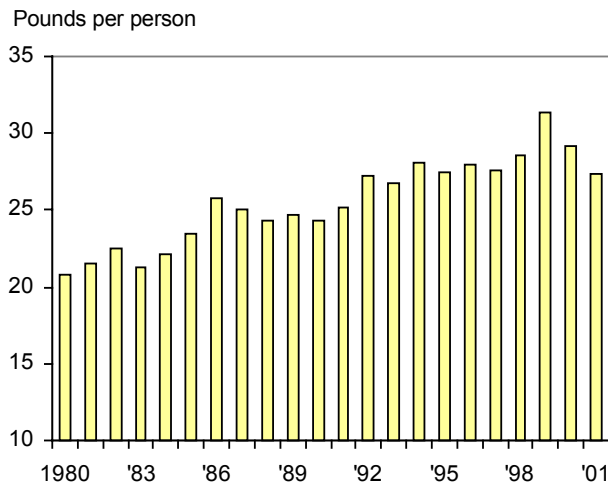
While limited in production in the United States, tropical fruit has increased its presence in the U.S. fruit market mainly through imports. The United States is a net importer of tropical fruit, the most prominent of which include bananas, mangoes, pineapples, and papayas. The growing ethnic diversity of the U.S. population, a relatively stronger U.S. dollar, and the mounting interest among Americans to explore new products (influenced to a large extent by their efforts to maintain a healthy diet) are some of the factors behind the growing demand for tropical fruit in the United States over the past several years (fig. 3). Fluctuations in production, however, particularly from among the major world suppliers, affect U.S. import patterns in the short run.

Figure 3  
U.S. per capita consumption of selected fresh tropical fruit



Source: Economic Research Service, USDA.

Figure 4  
**U.S. per capita consumption of fresh bananas**



Source: Economic Research Service, USDA.

In 2002, imports of bananas and papayas are lower than a year ago thus far, while imports of pineapples and mangoes are higher. Because imports make up the bulk of domestic supplies for these tropical fruit, per capita consumption for each of these tropical fruit in 2002 is expected to closely mirror the trend in imports.

### ***Lower Imports Continue To Drive Banana Prices Up in 2002***

Unlike other fresh tropical fruit, bananas are traditionally regarded as a staple in the American diet, ranking number one in fresh fruit consumption in the United States for over two decades now. The bulk of bananas marketed in the United States are imported from overseas, as U.S. production accounts for only a fraction of total domestic supplies. Bananas are produced almost entirely in developing economies and serve as a staple in many of these countries.

Some of the largest banana producers, such as India and Brazil, do not participate in world banana trade. However, high demand for bananas in high-income countries such as the United States, the European Union, Canada, and Japan, has encouraged trade in other developing countries, including major producers such as Ecuador, the Philippines, Indonesia, Costa Rica, Mexico, Thailand, and Colombia. The United States remains the world's largest market for bananas with main suppliers being Costa Rica, Ecuador, Guatemala, Colombia, Honduras, and Mexico. Over the past two decades, however, the United States' share of world banana imports has declined slightly as new markets, such as the Eastern European countries, emerged.

Bananas' appeal to the American consumer stems from being a relatively less expensive fruit than most other fruit, convenient to eat, and available year round. Through most of the last three decades, U.S. fresh banana imports (reflecting net of re-exports) increased in volume, rising from 3.6 billion pounds in 1970 to a record 8.5 billion pounds in 1999. Throughout the 1990s, U.S. banana imports averaged close to three-quarters of the total volume of U.S. fresh fruit imports. Fresh banana consumption increased from 20.8 pounds per person in 1980 to a record 31.4 pounds in 1999 (fig. 4).

Bureau of the Census data on U.S. banana imports reported volume down 4 percent during January-February 2002 from the same period a year ago. Additional data from USDA's Agricultural Marketing Service (AMS) also reports season-to-date import shipments lagging last year's volume through April. As a result, retail prices for bananas have held up strong during the first three months of 2002, up 2 percent from the same period a year ago. In addition, overall U.S. fruit prices, including fresh-market

Table 6--U.S. imports of fresh bananas, excluding plantains, by country, 1992-2001

Country	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
	Million pounds									
Costa Rica	2,104	2,034	2,154	2,112	2,138	2,103	2,405	3,536	3,001	2,386
Ecuador	1,976	1,679	1,733	2,054	1,871	1,925	2,381	2,578	2,152	2,087
Guatemala	843	833	970	1,022	1,114	1,020	1,443	1,107	1,518	1,834
Colombia	917	1,315	1,388	969	841	1,028	915	1,336	1,329	1,045
Honduras	905	941	1,096	1,285	1,410	1,243	831	184	608	841
Mexico	873	680	423	343	312	446	486	310	188	141
Other countries	166	265	381	293	640	552	165	410	91	134
World	7,785	7,745	8,144	8,077	8,327	8,317	8,627	9,461	8,886	8,467

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

oranges and apples, are being pressured upwards thus far by reduced production. A combination of reduced supplies and higher prices will likely cause per capita banana consumption in the United States to drop again this year and if it does, this will be the third year in a row that banana consumption has fallen. Consumption was estimated at 27.4 pounds per person during 2001, down 6 percent from a year earlier. Besides lower supplies and higher prices, increased competition resulting from sharply lower orange prices also helped push down consumption last year.

Retail banana prices averaged \$0.51 a pound during 2001, up 1 percent from the previous year and the highest on record. U.S. banana imports declined for the second consecutive year in 2001, down 5 percent from 2000, to 8.5 billion pounds (table 6). Import volume, however, was higher last year than those imported prior to 1998. Shipments were lower from major foreign suppliers with the exception of Guatemala and Honduras from which volumes were up 21 percent and 38 percent, respectively. As Honduras' banana production region continues to recover from major damage brought by Hurricane Mitch in November 1998, U.S. imports from that country were up sharply from 1999 but remain below pre-hurricane volumes.

Hawaii's banana production declined slightly in 2001, following four consecutive years of growth. Although harvested acreage increased slightly, production of the Cavendish variety, the highest yielding banana, declined. Lackluster demand, which triggered some growers to cut off some fruit bunches, also contributed to lower average yields. Production last year was down 3 percent from the record-large crop of 29.0 million pounds harvested in 2000. Growers received an average of \$0.38 per pound for their 2001 harvest, up from \$0.36 in 2000. With the higher prices, the

farm value reached a record \$10.6 million last year, up 2 percent from 2000. Prices in January 2002 were up 12 percent from the same period a year ago, given a sharp decline in production that month which was largely attributed to the exit of a major grower at the end of 2001, according to the Hawaii Agricultural Statistics Service. Even with no major weather problems, production will likely continue lower during the succeeding months given the absence of this major grower.

### ***Pineapple Imports Likely To Be Tight in the Coming Months***

Total imports of pineapples decreased 1 percent in 2001 from the previous year, mainly due to the decline in imports of canned pineapples (down 8 percent), the largest component of pineapple products entering the U.S. market (table 7). Meanwhile, increases were noted for imports of both fresh/frozen pineapples and pineapple juice (tables 8 and 9). Because imports comprise the bulk of U.S. pineapple supplies, total pineapple consumption in the United States during 2001 declined 2 percent, to an estimated 12.56 pounds per person, fresh-weight equivalent. Also, Hawaii's pineapple production in 2001, although small in relation to imports, was 9 percent short of the previous year, at 323 million tons, with reduced utilization reported for both the fresh and processing markets. Per capita consumption of canned pineapples and fresh pineapples fell 8 percent and less than 1 percent, while pineapple juice consumption increased 2 percent.

Imports of canned pineapples dropped to 650.2 million pounds, product-weight basis (1.1 billion pounds, fresh-weight equivalent) in 2001. Imports were down from most major suppliers, including the Philippines, Thailand, Indonesia, and the Republic of South Africa. Meanwhile, imports of fresh pineapples and pineapple

Table 7--U.S. imports of canned pineapples, by country, 1992-2001

Country	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
	1,000 Pounds									
Philippines	282,596	283,216	284,619	274,709	276,574	277,709	247,345	274,052	306,735	296,983
Thailand	384,948	379,245	339,949	219,508	172,067	167,347	109,955	257,272	183,580	169,492
Indonesia	36,299	42,093	53,819	61,580	120,862	145,840	108,676	144,861	146,360	122,065
China	2,027	974	666	1,051	3,907	5,011	22,354	29,904	17,098	17,905
Republic of South Africa	10	1,347	4,016	12,509	14,228	18,642	21,248	11,405	27,757	17,179
Other countries	55,658	55,090	57,071	85,621	72,203	46,655	38,822	40,930	22,845	26,623
World	761,538	761,965	740,139	654,977	659,840	661,204	548,399	758,424	704,376	650,246

Source: Bureau of the Census, Department of Commerce.

juice increased to a total of 715.6 million pounds and 70.8 million single-strength gallons in 2001. Except for Honduras, fresh pineapple imports increased from the top suppliers, and while about 80 percent of the fresh shipments come from Costa Rica, increased shipments from the other leading suppliers were far larger than the 1-percent increase reported from this number one supplier. Philippine shipments of pineapple juice to the U.S. market, the largest volume from among the suppliers, increased 13 percent. Shipments from Indonesia also increased moderately while all other important suppliers of pineapple juice such as Thailand, Costa Rica, and Mexico posted declines in their shipments last year.

Total pineapple imports in January-February 2002 were up 6 percent from the same period a year ago. Canned and juice shipments were both ahead of last year, while fresh shipments lagged behind. Although higher early into 2002, tight supplies are likely in the coming months, especially for canned pineapples and

pineapple juice, as weather-related conditions have reduced production in the Philippines, Indonesia, and Thailand. If supplies do drop, U.S. per capita consumption of pineapples may again drop in 2002.

Below-normal precipitation in Hawaii during 2001 affected fruit size in some pineapple production areas, causing a drop in production that year. Harvested acreage was reported at 20,100 acres, down 3 percent from 2000. Over 65 percent of Hawaii's pineapple crop are processed. In 2001, both processing and fresh utilization dropped 8 percent and 10 percent, respectively. While growers received 7 percent more per ton for their 2001 fresh-market pineapples, the price per ton of processing pineapples was just about unchanged from 2000. Overall, growers received an average of \$298 per ton of pineapples (all uses) in 2001, 4 percent more than the year earlier. The value of farm sales last year, however, fell 5 percent to \$96.3 million, due to the much larger drop in crop size.

Table 8--U.S. imports of fresh and frozen pineapples, by country, 1992-2001

Country	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
1,000 Pounds										
Costa Rica	129,102	161,716	185,352	172,995	192,305	344,342	446,029	504,018	574,663	581,531
Mexico	14,861	17,145	13,148	13,599	17,849	35,423	41,009	33,530	38,505	54,180
Honduras	69,346	58,861	63,977	73,375	60,126	54,460	59,414	73,976	72,570	44,690
Ecuador	0	0	289	3,241	8,939	9,281	5,268	11,785	14,341	18,788
Thailand	4,270	5,977	6,782	4,000	6,179	5,299	6,505	4,722	6,255	8,021
Guatemala	850	680	748	1,202	877	333	1,018	3,846	1,681	5,581
Dominican Republic	55,566	38,606	23,396	7,488	9,106	1,106	331	64	1,568	1,134
Vietnam	0	0	0	0	0	0	0	344	497	741
Other countries	562	1,753	917	2,876	9,717	5,604	3,919	410	1,211	984
World	274,557	284,740	294,609	278,775	305,098	455,849	563,493	632,697	711,292	715,650

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

Table 9--U.S. imports of pineapple juice, by country, 1992-2001

Country	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
1,000 single-strength gallons										
Philippines	41,462	37,690	36,796	43,718	36,806	37,673	33,963	33,459	34,971	39,420
Thailand	35,364	41,769	27,121	30,440	31,131	23,045	17,203	29,573	22,522	21,454
Indonesia	288	871	3,423	3,951	6,771	8,888	5,244	9,795	6,260	6,949
Costa Rica	1,973	2,859	1,874	1,780	1,704	2,916	1,598	3,073	2,124	1,953
Kenya	0	110	0	0	0	279	0	0	417	290
Mexico	1,230	220	94	523	640	732	2,093	509	349	235
Other countries	7,579	5,484	3,906	4,607	6,793	2,550	1,400	1,815	838	520
World	87,897	89,003	73,215	85,019	83,846	76,082	61,502	78,224	67,482	70,821

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



## ***Mango Imports Continue Higher in 2002***

The United States is the world's largest importer of mangoes. Two driving forces behind the increased presence of mangoes in the U.S. market rest on the heightened awareness among Americans about the benefits to eating fruit and the growing presence of Hispanics and Asians in the country who are already familiar with the fruit. Exceeding consumption growth for most domestic fresh fruit, U.S. per capita consumption of fresh mangoes rose from 0.25 pound in 1980 to 0.54 pound in 1990 and remained consistently over 1 pound beginning in the mid-1990s. Virtually all of the mangoes consumed in the United States are imported from foreign sources, with Mexico as the number one supplier. Fueled mainly by proximity and by the North American Free Trade Agreement, the United States serve as the market for over 90 percent of mango exports from Mexico, the world's largest exporter. The rest of Mexico's exports go to Canada, the European Union, Japan, New Zealand, and Australia.

U.S. per capita consumption of fresh mangoes increased year after year for the past 9 years. During 2001, U.S. fresh mango imports increased 1 percent from the previous year to 524.6 million pounds (table 10), allowing for a rise in consumption from 1.80 pounds per person in 2000 to 1.84 pounds. Weather and phytosanitary factors were behind the 6-percent decline in Mexican shipments to the United States last year. However, despite this decline, significant increases in imports from other leading suppliers, particularly from Brazil, Peru, and Guatemala, boosted overall U.S. supplies.

With higher imports continuing into this year, prices are cheaper and consumption in the United States will likely increase in 2002. Imports in January-February 2002, based on data from the Bureau of the Census, were up 36 percent from the same period a year ago, with increases from most key suppliers. The Mexican shipping season for mangoes, begun around the third week of February and through the end of April, was running 52 percent ahead of the same period last year, according to weekly shipment data from AMS. Guatemala and Haiti are also important suppliers posting increased shipments this year thus far. AMS data show January-April import shipments are up 22 percent. F.o.b. shipping-point prices for Mexican mangoes as of the second week of April ranged from \$3.00-\$4.00 per 1 layer carton of 8s and 9s, various varieties, down from \$6.00 to \$7.00 the same time last year.

## ***2002 Papaya Imports Lagging Last Year***

Fresh papaya supplies in the United States lag those of other tropical fruit, particularly fresh bananas, pineapples, and mangoes. Papayas, however, are increasing its presence in the U.S. market. Since the mid-1990s, average domestic supplies more than doubled from previous years and most of this increase came from imports. During 1995-2001, imports averaged 75 percent of domestic supplies, increasing year after year except during 1997 and 1998. U.S. fresh papaya imports increased 21 percent during 2001 from the previous year, and totaled 186.1 million pounds (table 11). Together with a larger crop in Hawaii that year, U.S. papaya consumption increased

Table 10 --U.S imports of fresh mangoes, by country, 1992-2001

Country	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
	1,000 pounds									
Mexico	151,083	208,203	238,948	252,870	306,842	348,045	356,240	360,105	366,856	344,744
Brazil	3,769	6,972	4,859	6,457	10,773	11,913	15,540	28,030	37,443	59,427
Ecuador	825	731	1,933	3,285	8,569	1,936	11,596	22,910	38,922	42,037
Peru	6,696	5,599	7,602	8,447	9,896	7,378	8,007	25,090	27,111	34,288
Guatemala	0	1,372	5,239	12,823	15,175	14,921	22,555	21,051	18,262	22,739
Haiti	611	15,720	6,044	21,937	18,132	22,721	15,748	20,159	22,397	12,943
Costa Rica	49	14	33	41	802	1,263	891	2,393	3,223	4,384
Nicaragua	0	0	395	1,650	2,081	1,708	3,236	1,495	3,409	3,870
Other countries	6,203	5,303	6,320	4,851	5,508	1,323	1,365	1,447	682	165
World	169,236	243,914	271,373	312,361	377,777	411,207	435,177	482,681	518,305	524,597

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

15 percent in 2001 from the previous year, setting a record at 0.81 pound per person.

Similar to mangoes, Mexico is also the world's largest exporter of papayas and the major supplier to the United States. Over 80 percent of papayas imported into the United States during the 1990s were from Mexican orchards. Production in Mexico increased from 249,545 metric tons in 1990 to 700,000 metric tons in 2001, the third largest in the world, next to Brazil and Nigeria. While the majority of Mexico's production is consumed domestically, about one-tenth of their crop is exported annually.

U.S. papaya imports from Mexico were up sharply during 2001 and accounted for 82 percent of all fresh papaya shipments last year. Other leading suppliers also shipped more volume last year, including Belize, Brazil, and the Dominican Republic. Imports for 2002 thus far are lagging last year, raising both prices and the likelihood of a decline in per capita papaya consumption this year following three consecutive years of increases. According to data from the Bureau of the Census, imports in January-February 2002 were down 2 percent from January-February 2001, with

lower shipments from leading suppliers, except Belize. Shipment data from USDA's Agricultural Marketing Service were also consistent with that of the Bureau of the Census. Import shipments from January through April were lagging last year's shipments by 14 percent, with declines from Mexico, Brazil, and the Dominican Republic. F.o.b. shipping-point prices for Mexican papayas in April 2002 ranged from \$14.00 to \$15.00 per 35-40 pound carton (Maradol), compared with \$10.00 to \$12.00 in April of last year.

Hawaii's papaya crop increased for the third straight year in 2001. Production reached 55.0 million pounds, up nearly 1 percent from 2000. Although average yields were down 12 percent last year, harvested acreage increased from 1,650 acres in 2000 to 1,900 acres. Approximately 5 percent more papayas were sent to the fresh market during 2001 compared with the previous year while production for the processing market was reduced by 29 percent. Papaya growers, in general, received 13 percent less for a pound (includes all uses) of their harvest last year. The lower average price reflects cheaper prices for fresh-market papaya as processing papaya prices remained unchanged.

Table 11--U.S. imports of fresh papayas, by country, 1992-2001

Country	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
	1,000 pounds									
Mexico	18,615	21,533	32,996	67,156	110,661	88,233	87,438	123,307	121,527	151,879
Belize	1,347	4,297	3,962	1,438	5,347	7,971	9,397	8,485	12,269	12,868
Brazil	0	7	0	0	0	19	1,102	6,229	10,301	11,220
Dominican Republic	768	683	783	1,251	2,517	2,122	1,152	2,608	5,579	6,342
Jamaica	2,324	4,509	2,588	3,462	5,244	4,582	4,562	4,194	3,411	3,392
Other countries	40	271	847	82	2,326	3,338	1,967	1,738	986	371
World	23,094	31,301	41,176	73,388	126,095	106,264	105,620	146,561	154,073	186,072

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

### ***Domestic Tree Nut Production Up in 2001***

Tree nut production reached 2.6 billion pounds (in-shell basis) in 2001, up 21 percent from the previous year but up only 2 percent from 2 years ago, when the trees were on the same alternate-bearing cycle.

Production was up for all the major tree nuts, except pistachios. Almond production reached 830 million pounds, increasing 18 percent over last year and declining less than 1 percent from the previous record set in 1999. Hazelnut and walnut production increased from last season. Hazelnut production increased 113 percent over last year and 20 percent over 2 years ago. The 2001 walnut crop increased 28 percent over last year and 8 percent over the last “on cycle” crop 2 years ago. Pecan production, however, increased 5 percent from last year but was 22 percent lower than the similar cycle in 1999. Macadamia nut production showed a similar pattern. Pistachio production is on the opposite cycle of the other tree nuts and 2001 was the “off cycle” year for the crop. Crop size was off 34 percent from last year’s record crop, but up 31 percent from the similar cycle 2 years ago.

The weather has been mostly favorable in California for bloom and development for the 2002 nut crops. Weather during pollination was good, a very important element in getting a good nut set. California’s nut crops are reported to be developing well, as is Texas’ pecan crop. Due to the counter cyclical nature of the nut trees, pistachio production should be higher this coming year, with slight declines in most of the other nuts. The increase in bearing acreage may be a factor in offsetting the full affect of the “off cycle” for many of this year’s nut crops. The 2002 almond estimate was released May 10, forecasting a record high crop of 940 million pounds (shelled basis). The larger crop is attributed to record yields and a 1-percent increase in bearing acreage.

### ***More Acreage Comes Into Production in 2001***

Bearing acreage continues to increase for many tree nuts (table 12). Strong domestic and world demand for many of the nut crops results in more acres being planted and coming into production for almonds, pistachios, and walnuts. Macadamia nut bearing acreage increased in 2001 after declining the previous

year. The crop faces strong international competition that has been driving down prices and resulted in acreage being removed. Hazelnut acreage showed a slight decline in 2001 because data from Washington are no longer being published by USDA’s National Agricultural Statistics Service (NASS). Oregon, the major hazelnut producing State, actually had a slight increase in bearing acreage.

### ***Grower Prices Generally Follow Crop Trend***

Grower prices were reported lower in 2001 for all nut crops except pistachios as a result of larger crops. Conversely, the smaller pistachio crop pushed up grower prices.

While generally experiencing an upward trend in prices, the large crops over the past few years have been driving down grower prices for hazelnuts, almonds, and macadamia nuts. Record-breaking almond crops in the United States have been driving down almond prices since they peaked in 1995, reversing the upward price trend since 1970. The forecast record crop for 2002/03 is likely to drive down prices even lower than the present season. Large hazelnut crops in Turkey and Italy and macadamia nut crops in Australia and South Africa have influenced grower prices for the U.S. crops. Grower prices for macadamia nuts have been declining since 1996. Hazelnut prices were only slightly off trend in 2001, however, they have been on the decline since reaching their peak value in 1998.

Pistachio nut grower prices are the only domestically produced tree nut that has been showing a general downtrend. Since the crop began commercial production in the mid-seventies, prices peaked in 1980 at \$2.05 a pound and have been declining gradually since, averaging about \$1 a pound the past 2 years.

Pecan grower prices have shown a slight upward trend over the past 30 years. Pecan prices reflect the cyclical nature of the crop more than other tree nuts, with much more year-to-year variation around the trend. The lower reliance on exports as well as the much more diverse growing locations and variety in tree production for pecans may contribute to the more predictable price trend. As a result, pecan prices are

likely to increase this year to about \$1.10 a pound from \$0.69 a pound in marketing year 2001/02. Despite the lower prices growers received, the large crops helped boost total revenues for the year for almonds, hazelnuts, and macadamia nuts. Pecan revenues, however, declined for the second straight year. Production, while higher than the previous year was not sufficiently high to offset the decline in price. (Grower prices for walnuts will not be available until July 8, 2002.)

As a result of the larger crops and lower prices over the past few years, both domestic consumption and exports have been growing. Consumption has increased considerably over the past few years for almonds, hazelnuts, and pistachios. Exports have also increased, making the United States an important source for tree nuts around the world.

### ***Nut Shipment Increases With Production***

According to industry data, domestic and export shipments for almonds, walnuts, pistachios, and hazelnuts have been higher this year through March than during the same period a year ago. Shipments to

the domestic market are up 13 percent for almonds, 3 percent for in-shell pistachios, and 28 percent for hazelnuts. Walnut domestic shipments were 7 percent lower so far this year, but exports were higher, pushing total walnut shipments for 2001/02 through March up 2 percent to 208.5 million pounds in-shell equivalent.

Exports have been strong so far this year for all the tree nuts except pecans. For industries, such as almonds, hazelnuts, and walnuts, exports are a major portion of their markets and the industries are heavily reliant on exports for revenues. Exports play a smaller roll in marketing pistachios, macadamia nuts, and pecans (fig.5).

So far this marketing season, almond exports have been 21 percent above last year. In-shell exports to India, the major market, were 68 percent above last year from July through February. Exports were also up sharply to Japan. While Asia is the major export market for in-shell almonds, Europe is the major market for shelled almonds. Shelled almond exports are higher to all the major markets, including Spain, the second leading almond producer after the United

Table 12--Tree nuts: Acreage, yield per acre, production, and price, 1998/99-2000/01

Commodity and year	Bearing acreage Acres	Yield per acre Pounds	Production 1/ 1,000 lb	Grower price \$/pound
<b>Almonds</b>				
1999/2000	480,000	2,800	1,343,600	0.86
2000/01	500,000	2,300	1,146,800	0.97
2001/02	525,000	2,640	1,386,600	0.84
<b>Macadamia nuts</b>				
1999/2000	18,900	3,000	56,600	0.67
2000/01	17,700	2,820	50,000	0.59
2001/02	17,800	3,040	54,000	0.58
<b>Pistachios</b>				
1999/2000	71,000	1,740	123,000	1.33
2000/01	74,600	3,260	243,000	0.99
2001/02	78,000	3,120	161,000	1.04
<b>Hazelnuts</b>				
1999/2000	29,200	2,740	80,000	0.45
2000/01	28,650	1,580	45,000	0.45
2001/02 2/	28,500	3,360	96,000	0.35
<b>Walnuts</b>				
1999/2000	191,000	2,960	566,000	0.44
2000/01	193,000	2,480	478,000	0.62
2001/02	196,000	3,120	610,000	3/
<b>Pecans</b>				
1999/2000	--	--	406,200	0.81
2000/01	--	--	209,800	1.14
2001/02	--	--	315,000	0.69

-- = not available.

1/ In-shell basis. 2/ Beginning in 2001/02 data no longer include Washington. 3/ Available July 8, 2002.

Source: National Agricultural Statistics Service; converted by the Economic Research Service, USDA.

States. Despite a larger crop this year in Spain, U.S. shipments have been 55 percent above a year ago. Spain's crop is still below 2 years ago, and the increased imports from the United States are needed to meet demand.

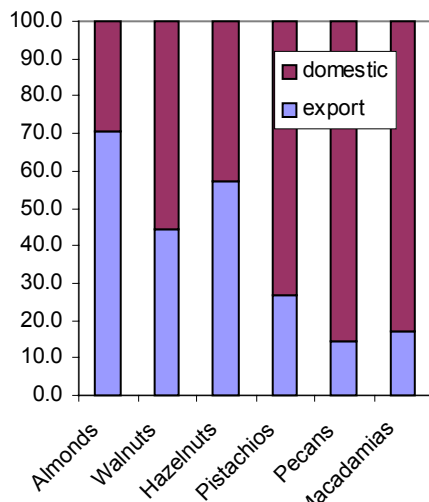
Walnut exports were 9 percent above last year from August 2001 through February 2002. The large U.S. crop coupled with lower production out of Italy and France have helped boost in-shell walnut exports to Italy and the Netherlands. Exports to the number one and number three markets, Spain and Germany are behind last year at this time. Shipments of shelled walnuts were down to the number one market, Japan, however, increased shipments to Israel and Canada helped bring up international demand. Shipments to Spain of shelled walnuts were also up this year, despite the reduced quantity of in-shell walnuts being sent there. Together, Spain is receiving about the same quantity of walnuts as a year ago.

Hazelnut exports have been strong so far this year, running 38 percent above last year from July 2001 to February 2002. U.S. shipments are up despite large crops from most of the major producing countries, especially Turkey, which in 2001/02 is expected to account for 75 percent of the world's production.

Pistachio nut shipments have been higher this September 2001 through February 2002 compared with the same period last year. Despite the smaller crop this year, exports were 9 percent higher. Shipments of in-shell pistachios increased 23 percent to Hong Kong and were even stronger going to Italy, China, and France. Shipments fell, however, to the second and fourth largest markets, Belgium and Germany. Large beginning stocks for this year's crop likely contributed to the larger shipments.

Pecan shipments have been down so far this season. From the beginning of the marketing season in July through February, exports have been off 5 percent from a year ago. The bulk of pecan exports are shelled, with over 40 percent going to Canada. Lower demand from Canada, the United Kingdom, and France resulted in the overall lower shipments. Exports of in-shell pecan shipments, however, were up, mostly due to demand in Mexico, the major market for in-shell pecans. Shipments to Mexico through February increased almost 100 percent from last season. Mexico's demand for U.S. pecans was unusually low last year, making this season's shipments seem especially high. Shipments so far in 2001/02, however, are running behind the previous three seasons to date.

Figure 5  
**U.S. tree nut markets, 1998-2000**  
 average  
 Percent



Source: Economic Research Service, USDA.

Table 13--Free-on-board tree nut prices, 2000-01

Month	Almonds		Pecans		Hazelnuts	
	Nonpareil supreme		Fancy halves		Large	
	2000	2001	2000	2001	2000	2001
--Dollars per pound--						
January	1.25-1.75	1.65	2.80-2.85	3.85-4.15	--	2.49
February	1.25-1.80	1.65	2.80-3.00	3.50-3.90	1.90	2.49
March	1.25-1.75	1.65	2.80-3.00	3.50-3.90	1.90	--
April	--	1.45	--	3.20-3.80	--	2.49
May	--	1.45	--	3.50	--	--
June	--	1.30-1.40	3.15-3.35	3.40-3.50	--	--
July	1.60-1.80	1.30-1.40	3.25-3.80	3.40-3.50	1.90	--
August	1.60-1.70	1.35-1.40	3.90-4.00	3.40-3.50	1.90	--
September	1.60-1.70	--	--	3.40-3.50	--	--
October	1.65	1.35-1.40	3.75-3.95	3.40-3.50	1.99	--
November	1.65	1.30-1.35	--	2.80-2.90	1.99	1.69
December	1.65	1.35-1.40	3.85	2.50-2.60	1.99	1.69
--Dollars per pound--						
	Macadamia nuts		Walnuts		Pistachios	
	Style 2		Light halves and pieces		U.S. No. 1 21/25	
	2000	2001	2000	2001	2000	2001
January	3.50-3.60	--	1.55-1.65	2.40-2.50	--	--
February	3.50-3.60	--	1.55-1.65	2.40-2.50	2.45	--
March	--	--	1.60-1.65	2.45-2.50	2.45	1.75-1.80
April	--	--	--	2.45-2.50	--	--
May	--	--	--	2.40-2.45	--	1.70-1.75
June	--	--	--	2.40-2.50	--	1.55-1.65
July	--	--	1.80-2.10	2.40-2.45	1.85-2.30	1.55-1.65
August	--	--	--	2.40-2.45	--	1.55-1.65
September	--	--	2.00-2.15	2.40-2.45	1.80-1.85	1.55-1.65
October	--	--	2.20-2.25	2.15	1.80-1.85	1.55-1.65
November	--	--	2.30-2.35	2.10-2.15	1.75-1.85	1.85
December	--	--	2.25-2.35	2.10-2.15	1.75-1.85	1.85

-- = Not available.

Source: Food Institute Report, January 2002.

## Fruit and Tree Nut Trade Outlook

### *U.S. Exports of Key Fresh-Market Fruit Down in 2001/02, Imports Also Down*

With the 2001/02 marketing season currently underway, U.S. fresh-market exports of apples, oranges, grapefruit, lemons, and strawberries are short of last season's volume thus far (table 14). Smaller crops and higher prices of apples and lemons have contributed to lower shipments so far this season, while disease and weather-related problems delayed the progress of California's 2002 strawberry crop. Strawberry shipments, however, are starting to pick up in volume and this year's anticipated larger, good quality strawberry crop will likely bolster export volumes in the coming months.

Aside from the expected smaller crop, wet conditions interrupted the start of the harvesting season for California navels, pushing the quantity of fruit exported down 13 percent compared with a year ago. Exports of fresh-market oranges, however, will likely

improve in the coming months as harvesting of the 2001/02 California Valencia crop, which is well underway and with good quality fruit reported, is expected to be 10-percent larger than the previous season. The 2001/02 U.S. grapefruit crop is expected to be 1 percent larger than a year ago, with Florida's crop providing the increase. Fruit size in Florida, however, is the smallest in the last 9 years, a characteristic that is less appealing to many international customers who prefer large-size fruit. Season-to-date grapefruit exports are down 13 percent.

Early indications of increased production of peaches, nectarines, and plums during 2002 could well likely result in higher exports this year, especially during the summer months when the stone fruit season gets underway. Export prospects for U.S. stone fruit this year will also be aided by a new Mexican-American stone fruit agreement (approved on April 4, 2002, by the U.S. Secretary of Agriculture and Mexico's

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

Commodity	Marketing season	Season-to-date (through February)		Year-to-date change
		2000	2001	
		--- 1,000 pounds ---		Percent
Fresh-market:				
Oranges	November-October	451,775	393,494	-12.9
Grapefruit	September-August	491,858	491,791	0.0
Lemons	August-July	139,081	121,727	-12.5
Apples	August-July	1,027,617	864,546	-15.9
Grapes	May-April	640,790	649,098	1.3
Pears	July-June	291,278	298,760	2.6
Peaches (including nectarines)	January-December	4,367	5,326	22.0
Strawberries	January-December	9,066	10,920	20.5
Sweet cherries	January-December	603	663	10.0
		--- 1,000 gallons ---		
Processed:				
Orange juice, frozen concentrate	October-September	20,092	18,109	-9.9
Orange juice, not from concentrate	October-September	27,222	19,811	-27.2
Grapefruit juice	December-November	6,311	4,622	-26.8
Apple juice and cider	August-July	3,755	3,999	6.5
Wine	January-December	10,620	10,436	-1.7
		--- 1,000 pounds ---		
Raisins	August-July	144,928	146,234	0.9
Canned pears	June-May	10,708	9,581	-10.5
Canned peaches	June-May	24,939	11,090	-55.5
Frozen strawberries	January-December	5,946	6,191	4.1
		--- 1,000 pounds ---		
Tree nuts:				
Almonds (shelled basis)	August-June	374,031	455,615	21.8
Walnuts (shelled basis)	August-July	74,330	81,521	9.7
Pecans (shelled basis)	July-June	14,117	13,336	-5.5
Pistachios (shelled basis)	September-August	13,973	15,245	9.1

-- = No data.

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

Secretary of Agriculture, Livestock, Rural Development, Fisheries and Food) which is aimed at easing the entry of U.S. stone fruit to Mexico, one of the leading markets for U.S. stone fruit. Under this agreement, an established systems approach will be used in conducting field tests for plant pests and, when a potential infestation is detected, only shipments from the growers or lots involved will be prevented from entry into Mexico rather than all U.S. stone fruit destined for that market.

Higher world prices for canned pears resulting from reduced world supplies, along with continued large supplies of canned peaches, are weakening the demand for U.S. canned pear exports during the 2001/02 marketing season. U.S. exports of canned pears so far this season compared with the 2000/01 season are down 11 percent. U.S. canned peach exports are down more sharply (down 56 percent) due mostly to increased competition from low-priced Greek canned peaches both in the domestic and

international markets. Meanwhile, most tree nut exports are up so far during the 2001/02 marketing season as domestic supplies receive a boost from the larger crops of almonds and walnuts and continued large inventories of pistachios.

U.S. imports are down so far this season for a number of fresh-market fruit (table 15). The largest declines are for limes and tangerines. Lime shipments are down sharply from Mexico where over 95 percent of U.S. lime imports come from. While the larger domestic crop may have also contributed to reduced imports, U.S. tangerine imports are also lower mainly as a result of the ban on Spanish clementines following detection of the Mediterranean fruit fly in some shipments in November.

Despite reduced domestic production, U.S. fresh apple imports are lower than a season ago so far due to reduced crops and lower exportable supplies in Canada and Chile, key exporters to the U.S. market.

Table 15--U.S. imports of selected fruit and tree nut products

Commodity	Marketing season	Season-to-date (through February)		Year-to-date change
		2000	2001	
		--- 1,000 pounds ---		Percent
Fresh-market:				
Oranges	November-October	9,854	19,613	99.0
Tangerines (including clementines)	October-September	185,622	122,393	-34.1
Lemons	August-July	38,725	48,948	26.4
Limes	September-August	202,551	84,786	-58.1
Apples	August-July	87,060	78,487	-9.8
Grapes	May-April	671,842	664,324	-1.1
Pears	July-June	58,075	70,239	20.9
Peaches (including nectarines)	January-December	77,287	70,139	-9.2
Bananas	January-December	1,377,180	1,317,856	-4.3
Mangoes	January-December	42,475	57,790	36.1
		--- 1,000 gallons ---		
Processed:				
Orange juice, frozen concentrate	October-September	108,185	71,770	-33.7
Apple juice and cider	August-July	162,501	209,698	29.0
Wine	January-December	18,018	19,337	7.32
		--- 1,000 pounds ---		
Canned pears	June-May	3,316	18,920	470.6
Canned peaches	June-May	84,397	73,730	-12.6
Canned pineapple	January-December	89,949	106,259	18.1
Frozen strawberries	January-December	12,727	16,989	33.5
		--- 1,000 pounds ---		
Tree nuts:				
Brazil nuts (shelled basis)	January-December	3,356	3,482	3.8
Cashews (shelled basis)	January-December	30,127	31,654	5.1
Pine nuts (shelled basis)	January-December	881	1,319	49.7
Pecans (shelled basis)	July-June	33,210	25,923	-21.9

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



The smaller grape crop in Mexico and the slow start in Chile's grape shipping season this winter have kept U.S. grape imports down from a year ago. Overall grape import volumes for the 2001/02 season, however, will likely improve as larger shipments entering the U.S. market from Chile began around February. About 63 percent of Chile's commercial table grape crop this year will be exported for fresh consumption, up 8 percent from a year ago, given the larger 2002 harvest and good quality production. The Chilean grape import season in the United States runs

from December through April (the off-season for U.S. grape production), with the bulk shipped during January through March, when Chile dominates the domestic grape market.

Besides the very small crop in Brazil, the larger Florida orange crop, which is utilized mostly for processing juice, and large beginning juice stocks, are driving down imports of frozen concentrated orange juice (FCOJ) so far in 2001/02 compared with a season ago.

## Commodity Highlight

### *The U.S. Pistachio Nut Industry*

The pistachio nut originated in the Middle East, where it is still popular today. The nut was introduced into Europe in the first century A.D. where it spread throughout the Mediterranean countries. The tree was first introduced in the United States in the mid-1800s. It did not, however, become a commercial industry until the mid-seventies. The U.S. industry celebrated its 25<sup>th</sup> anniversary in 2001.

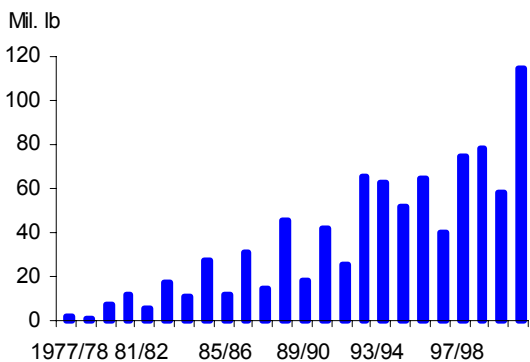
### *California, Home to the U.S. Industry*

U.S. commercial pistachio production is concentrated in California's San Joaquin Valley. The trees need winters with temperatures cold enough to break bud dormancy and summers that are long and hot. The trees are very drought tolerant and do not thrive under damp, humid conditions. The San Joaquin Valley perfectly suits these requirements and has become the center of the U.S. industry, accounting for about 98 percent of domestic production. Small quantities of commercial pistachio production can also be found in Arizona, New Mexico, Nevada, and Texas.

Production has grown rapidly in the United States, increasing from 1.8 million pounds (shelled basis) on 1,700 acres in 1977 to a record 243 million pounds on 74,600 acres in 2000 (fig. 6). The rapid growth in the U.S. industry has resulted in it becoming the world's second biggest producer, behind Iran, but ahead of Turkey, Syria, and China (fig. 7).

Figure 6

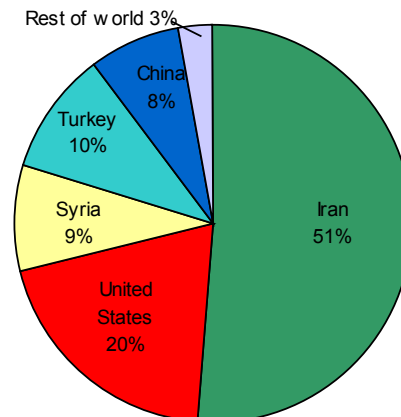
#### **U.S. pistachio production, 1977/78-2000/01**



Source: National Agricultural Statistics Service, USDA.

Figure 7

#### **Top five world producers of pistachio nuts\***



\*Average share of 1998-2001 world production.

Source: Food and Agriculture Organization of the United Nations.

Pistachio trees are alternate bearing. They produce a large crop one year followed by a much smaller crop the next year. While producers may have learned to moderate some of the alternate-bearing tendency, they are still unable to control it. For instance, 1997/98 and 1998/99 present two unusual years of increased production, followed by a 26-percent decline the next year only to increase 97 percent in 2000/01, when it set a record. To compensate for off-year production, the industry builds inventories during on-years to try to maintain a steady supply throughout. As a result of the rapidly growing industry and its ability to maintain supply stability, imports have fallen off sharply. During the industry's infancy, imports accounted for well over half of U.S. supply. By the late nineties, however, that share declined to less than 1 percent.

In the United States, the bulk of the pistachios are harvested in September. All of the harvesting is done mechanically by shaking the trees. Once harvested, they are hulled and dried to prevent staining on the shell. The highest valued nuts have split shells (naturally opened) and green kernels, with the deeper the green the more desirable.

## ***Pistachios Are Mostly Eaten As a Snack Food***

In the United States, most pistachio nuts are consumed as snack food and purchased in shell. They are also used by the food industry as ingredients in making confectioneries, ice cream, candies, sausages, baked goods, and flavorings. In the Middle East, pistachio nuts are important ingredients in both main dishes and desserts. With the growth in popularity of ethnic foods in this country and the growing population of Middle Eastern immigrants, there may be some shift away from using the nut only as a snack item.

About 80 percent of the pistachio nuts are sold in shell. The remaining 20 percent, which are shelled, go to the food industries. Prior to the mid-seventies, consumers had to rely on imports, mostly from the Middle East for their pistachios. These nuts were dyed red to hide stains on the shell and to make the nuts stand out in vending machines. With the growth of the U.S. industry and its harvesting methods, staining has become less of a problem. As a result, only a small amount of pistachio nuts are still dyed red, mostly because there are still people who prefer them that way.

## ***Export Markets Very Important To Pistachio Industry***

Since the mid-nineties, an average of 44 percent of the U.S. pistachio crop has been exported each season. Hong Kong is the major market for U.S. in-shell pistachio nuts, followed by Belgium, Italy, and Germany. China's market has grown rapidly in the past few years after being virtually nonexistent. It is assumed, however, that much of what is shipped to Hong Kong goes to mainland China, and in that way China has long been an important market.

Japan, Canada, and Israel account for almost 80 percent of exports of the shelled pistachio nuts. Until 1998/99, Hong Kong was the major market, but they have reduced their purchases of shelled nuts in favor of the less expensive in-shell nuts. Together, shelled and in-shelled exports accounted for \$44 million in 2000/01.

## ***Pistachio Consumption Growing Rapidly Since the Late Nineties***

Americans in general are not big nut eaters, and consumption lags far behind other horticultural products, such as fruit and vegetables. For example,

Table 16--Pistachios: Supply and utilization (shelled basis), 1970/71 to date

Season 1/	Utilized production	Loss and exempt 2/	Marketable production	Imports	Beginning stocks	Total supply 3/	Ending stocks	Exports	Consumption Total	Per capita
										Pounds
				--1,000 pounds--						
1990/91	42,047	--	42,047	853	10,045	52,945	16,864	8,682	27,399	0.11
1991/92	25,667	190	25,476	250	16,864	42,590	6,072	15,413	21,104	0.08
1992/93	65,585	223	65,362	396	6,072	71,830	17,595	27,763	26,471	0.10
1993/94	62,359	448	61,911	494	17,595	80,000	25,672	21,066	33,262	0.13
1994/95	51,375	125	51,250	732	25,672	77,654	16,825	25,275	35,554	0.14
1995/96	64,681	5,177	59,504	422	16,825	76,751	13,795	31,540	31,417	0.12
1996/97	40,425	--	40,425	944	13,795	55,163	7,696	32,202	15,266	0.06
1997/98	74,930	--	74,930	417	7,696	83,043	9,742	36,150	37,150	0.14
1998/99	78,208	--	78,208	549	9,742	88,499	21,264	25,793	41,443	0.15
1999/00	58,083	--	58,083	262	21,264	79,608	10,462	19,787	49,359	0.18
2000/01 3/	114,164	--	114,164	862	10,462	125,489	33,329	21,553	70,607	0.25

N.A. = not available. -- = Negligible amounts.

1/ Season beginning September 1. 2/ Inedibles and noncommercial usage. 3/ Preliminary estimates.

Sources: Economic Research Service, and National Agricultural Statistics Service, USDA; California Pistachio Commission; and Bureau of Census, U.S. Department of Commerce.

in 2001, the average American consumed 13 pounds of fresh oranges, 8 pounds of fresh grapes, and 6 pounds of fresh broccoli. Even consumption of less popular fruit and vegetables, such as mangoes, kiwifruit, and artichokes, exceeded that of most tree nuts.

Among domestically produced tree nuts, pistachio nut consumption ranks low. Americans consume more almonds, hazelnuts, pecans, and walnuts than pistachios.

Even though pistachio nut consumption is small, it has been growing rapidly, about 9 percent annually, with the rate jumping to 18 percent a year over the past 4 years. In 2000/01, Americans consumed about one-quarter of a pound of pistachio nuts per person, the largest amount on record (table 16). Consumption

is closely tied to production, and the rapid increase in consumption in the past few years is partially attributed to record-sized crops, usually accompanied by lower prices.

Consumers are also increasing their consumption of pistachios because of the health benefits attributed to nuts. Research has found that pistachio nuts are rich in calcium, Vitamin B-6, thiamin, phosphorus, iron, magnesium, copper, and fiber. A recent study found that by eating two ounces of pistachios a day could lower an adult's cholesterol level significantly. Pistachio nuts have monounsaturated fat, similar to other nuts, as well as olive oil and avocados and are cholesterol free. Due to the continued publicity surrounding these findings, and the lower prices due to record crops, pistachio consumption can be expected to increase over the next several years.

## Contacts and Links

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### Data Tables

The following links provide the tabular data in Excel 97 spreadsheets on fruits associated with this issue of the *Fruit and Tree Nuts Outlook*.

Compilations:

1. Bananas: Number of farms, acreage, production, price, and value, Hawaii, 1977 to date, <http://www.ers.usda.gov/publications/fts/May02/bananaproduct.xls>
2. Pineapples: Number of farms, acreage, production, disposition, price, and value, Hawaii, 1977 to date, <http://www.ers.usda.gov/publications/fts/May02/pineappleprod.xls>
3. Mangoes: Acreage, bearing trees, production, season-average grower price, and value, Florida, 1977 to date, <http://www.ers.usda.gov/publications/fts/May02/mangoproduct.xls>
4. Papayas: Acreage, yield per acre, production, utilization, and season-average grower price, Hawaii, 1977 to date, <http://www.ers.usda.gov/publications/fts/May02/papayaproduct.xls>

The *Fruit and Tree Nuts Situation and Outlook Yearbook* (<http://www.ers.usda.gov/publications/fts/yearbook01/FTS-294.pdf>) has over 130 tables of annual or monthly time-series data on specific fruit commodities. Data includes bearing acreage, production, prices, trade, per capita use, and more.

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