United States Department of Agriculture

FTS-304

May 28, 2003

Outlook

Electronic Outlook Report from the Economic Research Service

www.ers.usda.gov

Fruit and Tree Nuts Outlook

Agnes Perez and Susan Pollack

U.S. Tropical Fruit Supplies Larger, California Stone Fruit Supplies Lower

Contents
Price Outlook
Fruit and Tree Nuts Outlook
Fruit and Tree Nuts Trade Outlook
Commodity Highlight: Pecans
Contacts and Links

Tables
Grower prices
Retail prices
Tropical fruit:
Bananas
Papayas
Mangoes
Pineapples
Stone fruit:
Peaches
Nectarines
Plums
Fruit exports
Fruit imports

Briefing Room
Fruit & Tree Nuts

The next release is July 30, 2003

Approved by the World Agricultural Outlook Board.

The April grower price index for fruit and nuts rose 14 percent from the previous month and is up 9 percent from the April 2002 index. This was the first time this year that the index rose above a year ago. Higher grower prices for apples, pears, and strawberries were behind the stronger index. Most citrus prices remained lower than last year, except for grapefruit. Meanwhile, the April Consumer Price Index for fresh fruit averaged 3 percent above last April. Consumers paid higher prices for Red Delicious apples, bananas, strawberries, and grapefruit, but lower prices for navel oranges, lemons, and Thompson seedless grapes.

Overall U.S. supplies of major tropical fruit in 2003 are up from a year ago. January-March imports of bananas, papayas, and pineapples were higher than in January-March 2002 while imports of mangoes were lower. With imports representing the bulk of domestic supplies, prices for most of these fruit have averaged lower as a result of increased supplies. Per capita consumption for nearly all the major tropical fruit in 2003 is expected to be up, granted overall import supplies remain above a year ago and prices lower through most of the year.

Despite some spring storms and the lack of chill hours this winter, California stone fruit supplies are expected to be adequate to meet consumer demand. The U.S. Department of Agriculture forecast the 2003 California peach crop to be 1.9 billion pounds, only fractionally smaller than their record-large production a year ago. Pre-season crop estimates from the California Tree Fruit Agreement, a grower-funded organization promoting the marketing of fresh peaches, nectarines, and plums, point to a 6-percent decline in nectarine production and a 5-percent increase in plum output. Because overall supplies will be down from last year, prices will likely average stronger for the season, particularly for peaches and nectarines.

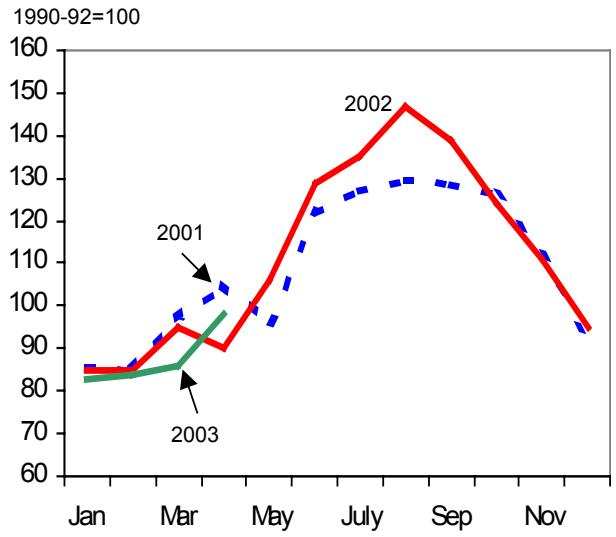
The National Agricultural Statistics Service reports the first forecast for the 2003 almond crop at 920 million pounds, shelled basis, 15 percent below the 2002 record crop. Cool, wet weather during the bloom period lowered yields. This season's grapefruit utilized production fell 2 percent from the previous forecast, due to a smaller-than-expected harvest in Florida. Florida's Valencia orange crop increased 2 percent but the juice yield per box of fruit fell 1 percent. With the decline in juice yields, the 2002/03 forecast for orange juice production has been lowered fractionally to 1.251 billion gallons, single-strength equivalent.

Price Outlook

2003 Fruit Grower Prices Recover in April

The grower price index for fruit and nuts for March was 9 percent lower than the same period last year and the lowest March index in 7 years (fig. 1). Grower prices for major citrus fruit—oranges, grapefruit, and lemons—all averaged much lower, pulling the index down. Although lower than last year, the index has been rising continuously since January, and in April, the index rose 14 percent from the previous month and is up 9 percent from the April 2002 index. This was the first time this year that the index rose above a year ago. The stronger index may be attributed mainly to higher grower prices for apples, pears, and strawberries (table 1). Higher prices for fresh grapefruit also helped boost the index while most citrus prices remained lower than last year.

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



Source: National Agricultural Statistics Service, USDA.

Due to smaller crops harvested in the fall of 2002, grower prices for storage apples and pears continue higher than last year and are expected to remain that way through the end of the 2002/03 marketing season. Despite seasonally declining supplies, increased apple marketings in March forced storage apple prices to decline that month from the previous 2 months. Based on data provided by the U.S. Apple Association, movement of fresh-market apples in March 2003 surpassed those in March 2002 by 6 percent, and the quantity of fresh-market apples in storage as of March 1 were unchanged from the same period a year ago. Apple prices rose in April as supplies grew more scarce. Both the quantity of fresh-market apples in the open market and in storage during April fell from the previous month and from the same time last year.

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

Commodity	2002		2003		2002-03 Change	
	Mar.	Apr.	Mar.	Apr.	Mar.	Apr.
	---- Dollars per box -----				Percent	
Citrus fruit: 1/						
Grapefruit, all	1.66	1.38	1.37	1.29	-17.5	-6.5
Grapefruit, fresh	4.72	4.25	4.27	4.56	-9.5	7.3
Lemons, all	5.89	8.48	1.33	3.76	-77.4	-55.7
Lemons, fresh	11.80	14.23	5.02	9.84	-57.5	-30.9
Oranges, all	4.64	4.65	4.59	4.46	-1.1	-4.1
Oranges, fresh	9.53	9.96	5.94	7.15	-37.7	-28.2
Noncitrus fruit:	---- Dollars per pound -----					
Apples, fresh 2/	0.220	0.218	0.226	0.234	2.7	7.3
Grapes, fresh 2/	--	--	--	--	--	--
Peaches, fresh 2/	--	--	--	--	--	--
Pears, fresh 2/	0.134	0.134	0.189	0.184	41.0	37.3
Strawberries, fresh	0.873	0.627	0.611	0.770	-30.0	22.8

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.

The season for California strawberries is underway full scale. So far, larger production in the State this year has resulted in lower strawberry prices during the first 3 months of 2003 compared with the previous year. Seasonally increasing supplies during the same period also caused prices to decline. Cool, wet weather in California in April, however, slowed the harvesting process and resulted in fewer shipments than in April 2002, based on data from the U.S. Department of Agriculture's Agricultural Marketing Service. In addition, heavy rains accompanied by hail also caused some rot damage. Strong demand during a typically heavy volume period caused strawberry prices to rise 24 percent from the previous month and average 23 percent higher than in April 2002.

Early into May, harvesting of strawberries continued as weather conditions permitted but market demand continued to exceed supplies. Shipments were still lagging those of the same time last year and were mostly for previous commitments. The May average grower price for fresh strawberries has not been reported yet but f.o.b. shipping-point prices were registering higher. As of early May, strawberry f.o.b. prices were reported to range around $7.90 to $8.90 per flat of 12 1-pint baskets in California's South District and Santa Maria growing areas and around $8.90 to $9.90 per flat in the Salinas-Watsonville area. Compared with the same time last year, f.o.b. prices ranged around $5.90 to $7.90 per flat. Granted more favorable weather conditions in the months ahead, shipments should recover and prices are likely to average lower if supplies do increase and exceed last year.

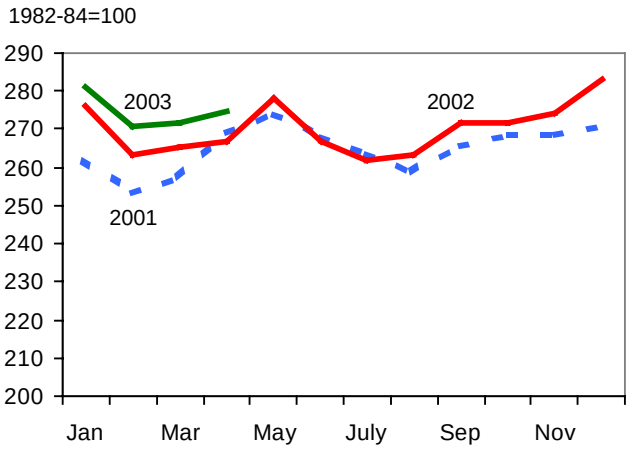
Retail Fresh Fruit Prices Continue Higher in 2003

The Consumer Price Index (CPI) for fresh fruit in April was 274.5, compared with 266.9 during the same period in 2002. This was the first time this year that the CPI followed the same direction as grower prices (fig. 2). The CPI remained stronger year-to-year since August 2002. Consumers paid higher prices for Red Delicious apples, bananas, strawberries, and grapefruit, but lower prices for navel oranges, lemons, and Thompson seedless grapes (table 2).

For apples and grapefruit, lesser availability in the grocery stores this year than in the previous year, mostly in response to smaller domestic crops, helped boost their prices. The largest price increase was for strawberries. As discussed earlier in the grower price section, strawberry supplies were curtailed in April due to heavy rains, resulting in higher grower and retail prices. Consumers were paying 4 percent less for a 12-ounce pint of strawberries in March compared with March 2002, but in April they were paying 13 percent more.

Retail prices for both bananas and Thompson seedless grapes have been volatile for the year thus far, perhaps due to fluctuations in imports. Winter grape shipments, mostly from Chile, were generally of very good quality this year and this helped boost consumer demand. As Chilean grape shipments tapered off in April, grape prices that month inched up a bit from the previous month but averaged lower than a year ago likely due to larger imports than a year ago. Shipments from both California's Coachella Valley and from Mexico, the United States' main grape suppliers during the spring, are earlier this year, with initial shipments reported as early as late April. Favorable weather helped the grape crop in Mexico to achieve good quality, but a smaller crop is expected due to its off-season cycle. However, shipments from both production regions are currently running ahead of last year, likely resulting in lower retail prices in May.

Figure 2
Consumer Price Index for fresh fruit



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

Table 2--U.S. monthly retail prices, selected fruit, 2002-2003

Commodity	Unit	2002		2003		2002/2003 Change	
		Feb.	Mar.	Feb.	Mar.	Feb.	Mar.
Fresh:							
Valencia oranges	Lb	--	--	--	--	--	--
Navel oranges	Lb	0.759	0.710	0.711	0.728	-6.3	2.5
Grapefruit	Lb	0.612	0.597	0.640	0.639	4.6	7.0
Lemons	Lb	1.270	1.151	1.224	1.144	-3.6	-0.6
Red Delicious apples	Lb	0.892	0.915	0.968	0.948	8.5	3.6
Bananas	Lb	0.504	0.519	0.508	0.513	0.8	-1.2
Peaches	Lb	--	--	--	--	--	--
Anjou pears	Lb	0.998	0.971	--	--	--	--
Strawberries 1/	12-oz pint	2.137	1.941	2.153	0.871	0.7	-55.1
Thompson seedless grapes	Lb	1.752	1.662	1.806	1.843	3.1	10.9
Processed:							
Orange juice, concentrate 2/	16-fl. oz	1.937	1.870	1.875	1.809	-3.2	-3.3
Wine	liter	6.039	6.236	6.050	6.451	0.2	3.4

-- 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.

Overall Supplies of Major Tropical Fruit Larger, Most Prices Lower

U.S. imports of major tropical fruit in 2003 are mixed but overall supplies are up from a year ago. January-March imports of bananas, papayas, and pineapples were higher than the same period a year ago while imports of mangoes were lower. More recent shipments of imported mangoes, however, are making a turnaround while imports of papayas are declining. With imports representing the bulk of domestic tropical fruit supplies, prices for most of these fruit have averaged lower as a result of increased supplies. Per capita consumption for nearly all the major tropical fruit in 2003 is expected to be up, if overall import supplies remain above a year ago and prices lower through most of the year.

Banana Supplies Picking Up, Prices Declining

Of all the fresh fruit made available to U.S. consumers each year, bananas represent the largest quantity, averaging around 8.0 million pounds over the last 5 years--nearly a quarter of domestic fresh-market supplies. U.S. supplies come almost entirely from imports, primarily from Latin American countries where climate and cheap labor provide economically suitable conditions for growing the crop. Only a small fraction is produced domestically, specifically in Hawaii where most of the sales remain within the Islands. Bananas' large presence in the U.S. market is reinforced by convenience, nutrition, year-round availability, and relatively low retail prices compared with other fresh fruit to make it the most consumed fresh fruit in the United States. Domestic consumption of fresh bananas averaged 28 pounds per person during 1998-2002, slightly higher than the combined consumption of all fresh citrus fruit and over a third of the total for all fresh noncitrus fruit.

U.S. banana imports during the first 3 months of 2003 were up 4 percent from the same period a year ago. The increase reflects larger imports from major suppliers to the United States, specifically Ecuador, Guatemala, Costa Rica, Colombia, Honduras, and Peru. Imports were 2 percent below a year ago in January, due mostly to significantly reduced supplies from Costa Rica brought by a mix of relatively cold temperatures, heavy rains, and flooding early this winter. Their shipments to the United States, however, have improved since then, increasing higher than a year ago in both February and March.

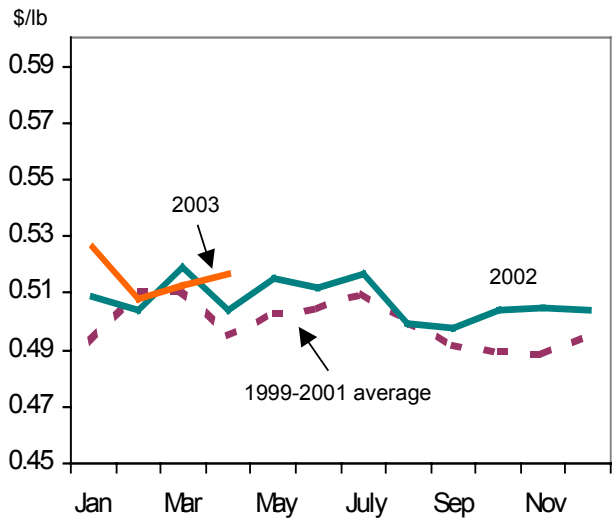
Costa Rica was the leading supplier of fresh bananas to the United States during the 1990s. Over the last 10 years, U.S. fresh banana imports from that country ranged from 23 percent to 37 percent of the total import volume. During 2002, while overall U.S. fresh banana imports increased almost 2 percent from the year before, supplies from Costa Rica were tight almost year round, falling 17 percent for the year (table 3). They dropped to third place among leading suppliers to the United States that year, next to Ecuador and Guatemala.

Table 3--U.S. imports of fresh bananas, excluding plantains, by country, 1993-2002

Country	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
					Million pounds					
Ecuador	1,679	1,733	2,054	1,871	1,925	2,381	2,578	2,152	2,087	2,253
Guatemala	833	970	1,022	1,114	1,020	1,443	1,107	1,518	1,834	2,040
Costa Rica	2,034	2,154	2,112	2,138	2,103	2,405	3,536	3,001	2,386	1,987
Colombia	1,315	1,388	969	841	1,028	915	1,336	1,329	1,045	1,117
Honduras	941	1,096	1,285	1,410	1,243	831	184	608	841	990
Mexico	680	423	343	312	446	486	310	188	141	93
Other countries	265	381	293	640	552	165	410	91	134	133
World	7,745	8,144	8,077	8,327	8,317	8,627	9,461	8,886	8,467	8,613

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

Figure 3
U.S. banana retail prices



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

As supplies continue to recover from the low volumes in December and January, banana prices will likely remain below a year ago. So far, banana prices have been variable with fluctuations in supply (fig. 3). If domestic banana supplies become consistently available in larger quantities and cheaper prices during the remainder of 2003 than a year ago, U.S. consumers will likely buy more bananas this year, raising domestic per capita consumption for fresh bananas up from last year's estimate of 26.6 pounds.

Hawaii's banana production in 2002 declined sharply from the year before, slipping from 28 million pounds to 19.5 million pounds, and prices were stronger, averaging a record 42 cents a pound (table 4). The exit of a major grower in the industry was a big factor in the large decline in production. Besides lower average yields, there was a 240-acre reduction in area

Table 4--Bananas: Number of farms, acreage, production, price, and value, Hawaii, 1977 to date

Year	Farms	Acreage harvested	Yield per acre	Utilized production	Farm price	Value of production
	Number	Acres	--1,000 pounds--		Cents/pound	1,000 dollars
1977	153	550	10.5	5,800	15.6	905
1978	147	560	8.6	4,800	18.5	888
1979	148	630	8.8	5,550	20.5	1,138
1980	159	580	7.9	4,600	23.9	1,099
1981	152	650	9.2	6,000	25.7	1,542
1982	179	720	8.0	5,750	28.6	1,645
1983	183	860	5.2	4,470	31.2	1,395
1984	180	870	10.2	8,900	30.0	2,670
1985	178	840	9.7	8,160	30.3	2,472
1986	185	980	9.9	9,700	30.0	2,910
1987	175	1,070	10.7	11,400	29.7	3,386
1988	160	1,070	12.3	13,200	33.0	4,356
1989	150	1,000	11.9	11,900	36.5	4,344
1990	150	930	12.2	11,300	38.0	4,294
1991	145	890	12.8	11,400	41.0	4,674
1992	135	870	13.8	12,000	41.0	4,920
1993	130	830	14.1	11,700	38.0	4,446
1994	145	880	15.6	13,700	37.0	5,069
1995	170	880	14.8	13,000	40.0	5,200
1996	170	960	13.5	13,000	40.0	5,200
1997	170	950	14.4	13,700	38.0	5,206
1998	200	1,420	14.8	21,000	35.0	7,350
1999	210	1,420	17.3	24,500	35.0	8,575
2000	210	1,460	19.9	29,000	36.0	10,440
2001	210	1,490	18.8	28,000	38.0	10,640
2002	N/A	1,250	15.2	19,000	42.0	7,980

N/A=Not available.

Sources: Statistics of Hawaiian Agriculture and National Agricultural Statistics Service, USDA.

harvested last year, leaving a total of 1,250 acres. Even with record-high prices, the crop value last year reached only $8.0 million, down from the peak in 2001 of $10.6 million. Production was up 13 percent in January 2003 from the same period a year ago, with the increase entirely associated with the dominant variety planted—the Cavendish. Despite increased production, the market remains strong with prices for Cavendish and Hawaiian apple bananas averaging higher.

Recent Lag in Imports Raise Papaya Prices

Together with increased domestic production (January-April), the Bureau of the Census, Department of Commerce report January-March U.S. fresh papaya imports up 13 percent from the same period in 2002. However, according to data from the U.S. Department of Agriculture's Agricultural Marketing Service, more recent import shipments are falling below last year and are causing prices to increase and average near last year's, sometimes a little higher. Earlier on, prices were slightly lower than last year. Should this trend continue through most of the year, domestic consumption of fresh papayas will likely decline in 2003. F.o.b. shipping-point prices for Mexican papayas ranged from $12 to $15 per 35-40 pound carton (Maradol) in early May, with a few best averaging as high as $18.50 as of May 12. During the first part of April 2003, f.o.b. prices ranged from $12.00 to $14.50, compared with $14.00 to $15.00 the same time last year. Americans consumed an estimated 0.78 pound of fresh papayas per person during 2002, unchanged from the record peak of the previous year.

U.S. papaya imports average more than three-quarters of domestic supplies and over the last 4 years, volumes entering the U.S. market have increased. Mexico is by far the largest supplier to the United States, accounting for an average of 82 percent of total import volume since 1996 (table 5). Other important but much smaller suppliers are Belize, Brazil, the Dominican Republic, and Jamaica. Much of the increase in imported supplies thus far this year in the United States reflect a modest increase in imports from Mexico along with sharply larger shipments from Belize, Brazil, and other minor suppliers such as Guatemala and Thailand. Imports from the Dominican Republic and Jamaica are down sharply.

Following four consecutive years of growth, Hawaii's papaya production decreased 17 percent in 2002 from the previous year, to 45.5 million pounds (table 6). It seems though that production is making a comeback this year, thanks to better yields. Even with a decrease in harvested acreage, production during the first 4 months of 2003 is up 18 percent from the same period a year ago. Both the harvested acreage and average yield per acre declined during 2002, lowering production. Lackluster demand kept overall grower prices slightly lower in spite of reduced supplies, and the combined effects caused the crop value in 2002 to fall 19 percent, to $11.8 million. Grower prices for processing papayas were unchanged at 3 cents a pound while fresh-market papayas, which account for over 90 percent of production, fell slightly from 27.9 cents per pound to 27.5 cents. Prices for all papayas averaged 25.9 cents per pound in 2002, lower than any annual average price since 1994.

Table 5--U.S. imports of fresh papayas, by country, 1993-2002

Country	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
					1,000 pounds					
Mexico	21,533	32,996	67,156	110,661	88,233	87,438	123,307	121,527	151,879	147,632
Belize	4,297	3,962	1,438	5,347	7,971	9,397	8,485	12,269	12,868	24,297
Brazil	7	0	0	0	19	1,102	6,229	10,301	11,220	12,805
Dominican Republic	683	783	1,251	2,517	2,122	1,152	2,608	5,579	6,342	5,323
Jamaica	4,509	2,588	3,462	5,244	4,582	4,562	4,194	3,411	3,480	4,277
Other countries	271	847	82	2,326	3,338	1,967	1,738	986	371	907
World	31,301	41,176	73,388	126,095	106,264	105,620	146,561	154,073	186,161	195,239

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

Papaya production is largely concentrated in the Big Islands. There they housed 122 papaya farms in 2002 covering 90 percent of the State's total papaya acreage. Based on the 2002 papaya acreage survey conducted by Hawaii's Agricultural Statistics Service, the number of farms growing papayas in all of Hawaii declined from 206 in 2001 to 161 in 2002. All growing regions reported a decline in farm numbers. About three-fourths of these farms are in Hawaii county (the Big Islands), but the largest decline was in Maui/Honolulu (numbers are reported combined for both these counties) where a total of 24 growers accounted for 7 percent of total acreage. Kauai had 15 growers who represented 3 percent of total acreage. Both bearing and nonbearing acreage declined in each of the growing regions except in Maui/Honolulu where there were 40 more nonbearing acres than in 2001, for a total of 90 nonbearing acres.

The genetically-modified variety, Rainbow, and the traditional Kapoho variety each represent over 40 percent of Hawaii's total papaya acreage. The Kapoho variety accounted for 53 percent of bearing acreage in 2002 but acreage share data on nonbearing acres suggest that future production growth will be stronger for the Rainbow variety, developed to be resistant to the papaya ringspot virus that is currently plaguing the industry. Local growers continue to plant the Kapoho variety, despite its susceptibility to the ringspot virus because it is the variety of choice in their largest export market, Japan.

Table 6--Papayas: Acreage, yield per acre, production, utilization, and season-average grower price, Hawaii, 1977 to date

Year	Acreage harvested	Yield per acre 1/	Utilized production	Utilization		Grower price		
				Fresh	Processed	Fresh	Processed	All
	Acres	Pounds	-- 1,000 pounds --			-- Cents/pound --		
1977	2,155	29.5	63,548	53,987	9,561	13.2	4.7	11.9
1978	2,190	40.6	64,000	54,624	9,376	14.4	4.6	13.0
1979	2,210	29.7	41,015	36,446	4,569	25.6	4.0	23.2
1980	1,950	37.9	48,916	45,360	3,556	21.7	3.4	20.4
1981	2,110	44.5	66,390	58,170	8,220	20.9	3.1	18.7
1982	2,170	38.7	52,750	44,770	7,980	25.1	3.1	21.8
1983	2,120	36.1	61,400	46,300	15,100	23.6	4.4	18.9
1984	2,590	46.3	80,500	67,000	13,500	13.1	3.1	11.4
1985	2,650	35.8	60,400	49,250	11,150	16.9	2.3	14.2
1986	2,355	35.2	61,000	50,100	10,900	21.7	2.3	18.2
1987	2,350	44.7	67,000	56,000	11,000	19.3	2.2	16.5
1988	2,300	2/	69,000	57,000	12,000	21.0	3.2	17.9
1989	2,500	2/	74,000	64,000	10,000	22.0	3.0	19.4
1990	2,400	2/	68,500	58,000	10,500	25.0	2.9	21.6
1991	2,025	2/	55,350	48,150	7,200	33.3	2.7	29.3
1992	2,415	29.5	71,300	55,800	15,500	25.0	3.0	20.2
1993	2,555	24.9	63,700	58,200	5,500	23.2	3.1	21.5
1994	2,200	28.2	62,000	56,200	5,800	24.3	3.0	22.3
1995	2,435	20.9	50,800	41,900	8,900	43.5	3.0	36.4
1996	1,835	22.8	41,800	37,800	4,000	44.8	3.0	40.8
1997	1,985	19.5	38,800	35,700	3,100	52.9	3.0	48.9
1998	2,120	18.8	39,900	35,600	4,300	35.0	3.0	31.6
1999	1,940	21.9	42,400	39,400	3,000	40.2	3.0	37.6
2000	1,650	33.0	54,500	50,250	4,250	31.6	3.0	29.4
2001	1,950	28.2	55,000	52,000	3,000	27.9	3.0	26.5
2002	1,700	26.8	45,500	42,500	3,000	27.5	3.0	25.9

1/ Prior to 1988, yields based on total production. Starting in 1993, yields based on utilized production. Only utilized production estimated beginning in 1988. 2/ Yield was not estimated for the 1988 through 1991 crops.

Source: National Agricultural Statistics Service, USDA.

Current Mango Supplies Lower Than Last Year

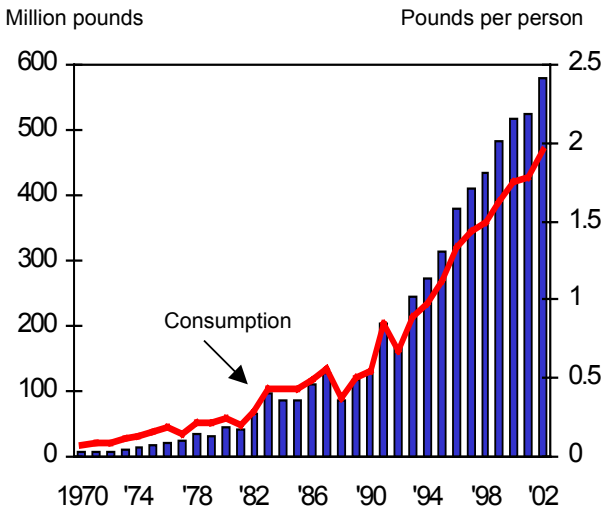
Mangoes are now one of the most liked tropical fruit in the United States. Average annual consumption for fresh mangoes increased from just a fraction of a pound per person during the 1970s to almost 2 pounds per person over the last 5 years (fig. 4). With very limited production of the fruit here (table 7), domestic demand is met almost entirely through imports. Around the world, the United States is by far the largest buyer, with annual import volume climbing each year since 1993, reaching a record of over 580 million pounds in 2002 (table 8).

Mexico is the world's largest exporter of mangoes, although production is substantially lower than in India and China, the two largest producers. Close to 90 percent of its exports are destined for the United States each year, with their shipment season lasting from around February through September. Several other countries export mangoes to the United States, including Brazil, Ecuador, Peru, Guatemala, and Haiti but at the least, more than half of U.S. imports come from Mexico.

Current domestic supplies are running lower than a year ago due mostly to a lag in early shipments coming in from Mexico. January-March imports were 17 percent lower than the same period last year, even with increased shipments from Peru which supplied most shipments in January and February. Industry sources have indicated the Mexican mango season has started off slow this year but supplies should be picking up volume and could match or exceed last year, with very good quality. Shipments from Mexico are typically heaviest around May through July, with a peak in June.

Data from the Agricultural Marketing Service of the U.S. Department of Agriculture have shown that Mexican mango shipments through most of April have turned around and surpassed the volume shipped the same time last year, after being sharply lower each week since mid-February when their shipping season began. Prices were averaging much higher than a year ago early on but have now declined to lower levels with increasing volume. As of early May, f.o.b. shipping-point prices for Mexican mangoes ranged from $3.00 to $3.75 per one layer carton of 8s and 9s, various varieties, down from $4.00 to $4.50 the same time last year. If overall

Figure 4
Fresh mangoes: Imports and domestic consumption



Source: Bureau of the Census, U.S. Department of Commerce and Economic Research Service, U.S. Department of Agriculture.

import volumes exceed last year's and prices remain lower, domestic consumption will likely break last year's record estimate of 1.96 pounds per person, increasing again for the 11th consecutive year.

Imports Continue To Provide Ample Pineapple Supplies

Total U.S. pineapple imports increased 12 percent in 2002 from the previous year, with increases in shipments of all pineapple products: fresh and frozen, up 26 percent; pineapple juice, up 6 percent; and canned pineapple, up 6 percent. Because imports comprise the bulk of U.S. pineapple supplies, total pineapple consumption in the United States during 2002 increased 7 percent, to an estimated 13.1 pounds per person, fresh-weight equivalent. Consumption of fresh pineapples increased 20 percent, to a record 3.8 pounds per person last year and consumption of juice and canned pineapples each increased 3 percent, to a fresh-weight estimate of 4.3 and 4.8 pounds per person, respectively.

U.S. imports of fresh and frozen pineapples reached a historical peak in 2002, totaling 902.6 million pounds (table 9). The top three suppliers—Costa Rica, Honduras, and Ecuador—all shipped larger quantities of the product for a combined shipment representing 94 percent of total import volume. The Philippines has been the United States' largest supplier of processed pineapple products since the mid-1990s (tables 10 and 11). Last year, imports of juice and

Table 7--Mangos: Acreage, bearing trees, production, season-average grower price, and value, Florida, 1977 to date

Year	Acreage			Bearing			
	Total	Nonbearing 1/	Bearing	trees	Production	Price 2/	Value
		--Acres--		1,000	1,000 pounds	Cents/pound	1,000 dollars
1977	1,800	150	1,650	130	9,625	25.00	2,406
1978	1,750	100	1,650	132	12,375	17.27	2,138
1979	1,750	300	1,450	116	14,300	20.55	2,938
1980	1,800	350	1,450	118	13,750	21.82	3,000
1981	1,900	450	1,450	123	13,200	25.27	3,336
1982	2,200	700	1,500	130	12,375	29.09	3,600
1983	2,400	900	1,500	137	19,250	21.82	4,200
1984	2,600	900	1,700	145	24,750	22.73	5,625
1985	2,700	900	1,800	154	23,375	22.73	5,312
1986	2,700	600	2,100	188	22,000	20.00	4,400
1987	2,800	600	2,200	195	30,250	21.82	6,600
1988	2,900	500	2,400	215	19,250	27.27	5,250
1989	2,900	400	2,500	228	22,000	23.64	5,200
1990	2,800	300	2,500	229	19,250	24.55	4,725
1991	2,700	200	2,500	232	27,500	22.36	6,150
1992	2,800	300	2,500	239	22,000	19.45	4,280
1993	1,600	0	1,600	149	2,750	34.55	950
1994	1,900	300	1,600	151	5,500	27.27	1,500
1995	1,800	300	1,500	142	8,250	20.91	1,725
1996	1,800	300	1,500	144	5,500	27.27	1,500
1997	1,700	300	1,400	142	5,500	26.36	1,450
1998	N/A	N/A	1,400	139	N/A	N/A	N/A
1999	N/A	N/A	1,400	142	N/A	N/A	N/A
2000	1,700	0	1,700	165	N/A	N/A	N/A
2001	1,700	0	1,700	165	N/A	N/A	N/A
2002	1,700	0	1,300	126	N/A	N/A	N/A

N/A=Not Available. 1/ Less than 5 years old. 2/ Price delivered to packinghouse door.

Source: Florida Agricultural Statistics Service.

Table 8--U.S imports of fresh mangoes, by country, 1993-2002

Country	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
					1,000 pounds					
Mexico	208,203	238,948	252,870	306,842	348,045	356,240	360,105	366,856	344,744	361,485
Brazil	6,972	4,859	6,457	10,773	11,913	15,540	28,030	37,443	59,385	79,454
Ecuador	731	1,933	3,285	8,569	1,936	11,596	22,910	38,922	42,037	47,311
Peru	5,599	7,602	8,447	9,896	7,378	8,007	25,090	27,111	34,288	45,227
Guatemala	1,372	5,239	12,823	15,175	14,921	22,555	21,051	18,262	22,739	21,053
Haiti	15,720	6,044	21,937	18,132	22,721	15,748	20,159	22,397	12,957	18,470
Nicaragua	0	395	1,650	2,081	1,708	3,236	1,495	3,409	3,870	3,150
Costa Rica	14	33	41	802	1,263	891	2,393	3,223	4,384	2,940
Other countries	5,303	6,320	4,851	5,508	1,323	1,365	1,447	682	165	1,506
World	243,914	271,373	312,361	377,777	411,207	435,177	482,681	518,305	524,569	580,596

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

canned pineapples from that country posted small declines that were more than offset by large increases from other leading suppliers. Pineapple supplies for 2003 continue to be abundant, with January-March imports higher for all product groups compared with the same period last year. Shipments of canned pineapples from the Philippines during those 3 months were only up by a fraction. However, a 26-percent increase in imports from Thailand, the second largest supplier to the United States, including sharp increases in imports from China, Malaysia, the Republic of South Africa, and Kenya have kept overall canned imports 16 percent above last year. Pineapple juice imports from the Philippines, meanwhile, are up sharply, more than compensating for much lower imports from other main suppliers, particularly Thailand, Indonesia, Costa Rica, Brazil, and Mexico.

Table 9--U.S. imports of fresh and frozen pineapples, by country, 1993-2002

Country	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
						1,000 Pounds				
Costa Rica	161,716	185,352	172,995	192,305	344,342	446,029	504,018	574,663	581,531	765,120
Honduras	58,861	63,977	73,375	60,126	54,460	59,414	73,976	72,570	44,690	45,478
Ecuador	0	289	3,241	8,939	9,281	5,268	11,785	14,341	18,788	40,405
Mexico	17,145	13,148	13,599	17,849	35,423	41,009	33,530	38,505	54,180	39,799
Thailand	5,977	6,782	4,000	6,179	5,299	6,505	4,722	6,255	8,021	6,845
Guatemala	680	748	1,202	877	333	1,018	3,846	1,681	5,581	1,617
Vietnam	0	0	0	0	0	0	344	497	741	1,468
Panama	57	298	92	5,627	564	299	0	275	561	930
Dominican Republic	38,606	23,396	7,488	9,106	1,106	331	64	1,568	1,135	328
Other countries	1,696	620	2,784	4,089	5,040	3,620	410	936	422	656
World	284,740	294,609	278,775	305,098	455,849	563,493	632,697	711,292	715,651	902,646

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

Table 10--U.S. imports of canned pineapples, by country, 1993-2002

Country	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
						1,000 Pounds				
Philippines	283,216	284,619	274,709	276,574	277,709	247,345	274,052	306,735	296,357	287,462
Thailand	379,245	339,949	219,508	172,067	167,347	109,955	257,272	183,580	168,261	183,595
Indonesia	42,093	53,819	61,580	120,862	145,840	108,676	144,861	146,360	122,026	135,323
China	974	666	1,051	3,907	5,011	22,354	29,904	17,098	17,888	31,459
Republic of South Africa	1,347	4,016	12,509	14,228	18,642	21,248	11,405	27,757	16,981	20,782
Other countries	55,090	57,071	85,621	72,203	46,655	38,822	40,930	22,845	26,623	25,837
World	761,965	740,139	654,977	659,840	661,204	548,399	758,424	704,376	648,136	684,457

Source: Bureau of the Census, Department of Commerce.

Table 11--U.S. imports of pineapple juice, by country, 1993-2002

Country	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
						1,000 single-strength gallons				
Philippines	37,690	36,796	43,718	36,806	37,673	33,963	33,459	34,971	39,319	38,754
Thailand	41,769	27,121	30,440	31,131	23,045	17,203	29,573	22,522	21,454	20,213
Indonesia	871	3,423	3,951	6,771	8,888	5,244	9,795	6,260	6,924	10,224
Costa Rica	2,859	1,874	1,780	1,704	2,916	1,598	3,073	2,124	1,953	3,716
Brazil	79	52		11		43	904	298	21	657
Mexico	220	94	523	640	732	2,093	509	349	235	627
Honduras	984	112	48	970	472	114	78	66	57	241
Other countries	4,531	3,742	4,558	5,812	2,357	1,243	832	892	734	940
World	89,003	73,215	85,019	83,846	76,082	61,502	78,224	67,482	70,698	75,372

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

Minute in relation to imports, Hawaii's pineapple production in 2002, valued at $100.6 million, declined 1 percent from the previous year, to 320 million tons (table 12). Processing production declined 5 percent while fresh-market output rose 6 percent. The processing sector continues to dominate utilization of the State's pineapple crop but economic factors such as increased foreign competition, rising production costs, and low market prices have been forcing a shift in production to the higher-valued fresh market. Much of the decline in overall production during the past three decades may be attributed to the downward trend in production for processing. The number of pineapple canneries diminished, with only one remaining in operation since 1993, down from eight as early as 1940 and four in 1970. The average share of production to be processed has dropped in favor of the fresh-market output, from about 91 percent during the 1970s, to over 80 percent during the 1980s and to near 70 percent in the last 12 years. In nominal terms, the price differential between what growers receive for fresh-market pineapples versus those for processing have widened through time, and in the last 5 years averaged $470 per pound.

Table12--Pineapples: Number of farms, acreage, production, disposition, price, and value, Hawaii, 1977 to date

Year	Farms	Acreage used for crop 1/	Utilized production 2/	Disposition		Farm price		Value of production 2/
				Processed 2/	Fresh market 3/	Processed 4/	Fresh market 5/	
	Number	1,000 acres	--1,000 short tons--			--Dollars/ton--		1,000 dollars
1977	17	45.0	690	607	83	67	260	62,249
1978	18	43.0	675	580	95	58	310	63,090
1979	18	44.0	681	587	94	67	320	69,409
1980	18	43.0	657	556	101	76	340	76,596
1981	18	41.0	636	519	117	85	390	89,745
1982	18	36.0	670	542	128	82	390	94,364
1983	18	35.0	722	602	120	88	395	100,376
1984	18	35.0	600	481	119	88	400	89,928
1985	18	34.5	565	441	124	90	410	90,530
1986	19	36.0	646	514	132	90	405	99,720
1987	12	36.1	692	558	134	91	362	99,286
1988	12	34.6	659	526	133	99	416	107,402
1989	10	32.7	580	435	145	90	408	98,310
1990	10	30.9	575	434	141	120	385	106,365
1991	10	28.4	555	430	125	130	415	107,775
1992	21	26.2	550	420	130	110	430	102,100
1993	20	22.0	370	235	135	110	400	79,850
1994	15	22.3	365	235	130	110	408	78,890
1995	15	19.9	345	220	125	113	500	87,360
1996	15	20.0	347	232	115	117	598	95,914
1997	15	19.9	324	221	103	127	618	91,721
1998	15	21.0	332	221	111	131	575	92,776
1999	15	21.0	352	230	122	126	594	101,448
2000	15	20.7	354	232	122	130	585	101,530
2001	15	20.1	323	213	110	129	626	96,337
2002	15	19.1	320	203	117	136	624	100,616

1/ Acreage is crop acres, not harvested acreage. 2/ Fresh-weight basis. 3/ Beginning in 1983, excludes sales of fresh pineapples (without tops) included in processing utilization. 4/ Value of fresh fruit delivered to processing-plant door. 5/ Value of fresh fruit at wholesale establishments for local sales and shippers dock for mainland and foreign sales.

Sources: Statistics of Hawaiian Agriculture and National Agricultural Statistics Service, USDA.

California Stone Fruit Supplies Expected Adequate Despite Lack of Chill Hours

The 2003 shipping season for Chilean stone fruit in the United States has ended in early April, bringing in increased quantities of peaches and nectarines this winter compared with the previous season but slightly reduced shipments of plums. Now, the market is supplied by domestically-grown stone fruit, the majority of which are produced from California tree fruit orchards. Although California's tree fruit remain vulnerable to adverse weather, current orchard conditions suggest that the State's major stone fruit crops (peaches, nectarines, and plums) are off to a good start this season and supplies are expected to be adequate to meet consumer demand.

According to the California Tree Fruit Agreement (CTFA), a grower-funded organization that promotes the marketing of fresh-market peaches, nectarines, and plums, the cool spring weather has helped the fruit in terms of color and size. The blooming stage was relatively long this year, meaning that harvesting will be stretched out this season. Hence, supplies will be more consistent throughout the season, likely avoiding wide fluctuations in prices. Fruit set was heavy even though the tree fruit orchards received fewer chill hours this winter than in the previous year. Peach, plum, and nectarine trees need 900 to 1,200 hours of temperature below 45 degrees over the winter to produce an abundant summer crop. This past winter, the number of chill hours ranged from 700 to 800 hours. Also, a hailstorm that swept through parts of the San Joaquin Valley on April 4 only resulted in minor damage. The hailstorm damaged plums in some orchards south of Fresno. Heavy rains also occurred in late April. However, because of the heavy fruit set this year, many of the damaged fruit were removed as part of the thinning process. This process is done particularly when there is a heavy fruit set to encourage the production of large-size fruit.

The U.S. Department of Agriculture forecast the 2003 California peach crop to be 1.9 billion pounds, only fractionally smaller than the record-large crop the State produced a year ago, but larger than any crop in previous years. Production of freestone peaches, mostly for fresh use, is forecast down 3 percent, to 770 million pounds. Meanwhile, processing supplies will likely be up given that production of clingstone peaches is forecast up 1 percent, to 1,140 million pounds. Production for both California nectarines and plums in 2003 will not be available until January 2004. However, pre-season crop estimates from the CTFA indicate average-size crops, with nectarine production down 6 percent from last year's record output and plum production up 5 percent. Plum production will be up mainly due to a new rule in the plum marketing order, allowing pluots, a cross between a plum and an apricot, to be voluntarily inspected and marketed as plums.

Harvesting of peaches and nectarines started around the second to the last week in April while picking for plums began in early May. Season-to-date shipments for peaches and nectarines (no data available yet for plums) are running behind last year, resulting in slightly higher prices, particularly for nectarines. As of May 16, f.o.b. shipping-point prices averaged $28.00 to $30.00 per two-layer tray pack of size 48-50 yellow flesh California well matured nectarine varieties and $22.00 to $26.00 for size 60-64. The same time last year, f.o.b. prices ranged from $24.00 to $28.00 for the 48-50 size range nectarines and $22.00 to $24.00 for the 60-64s.

F.o.b. shipping-point prices for yellow flesh California well matured peach varieties averaged slightly higher than a year ago for those in the 54-56 and 60-64 size ranges at the start of the season and lower for those in the 48-50 size range. Light demand as of mid-May pushed f.o.b. prices for the larger-size peaches also slightly below a year ago despite lower supplies. Also, prices are slightly lower this year perhaps because harvesting started about a week earlier compared with last season. F.o.b. prices ranged from $20.00 to $24.00 for a two-layer tray pack of 48-50s, down from $22.00 to $26.00 the same time last year. For the larger sizes, f.o.b. prices ranged from $18.00 to $20.00 for 54-56s and from $14.00 to $16.00 for the 60-64s. Around the same time last year, prices ranged from $20.00 to $22.00 and from $16.00 to $18.00, respectively. Regarded as among several traditional summer fruit, overall demand for peaches, nectarines, and plums should improve as the summer kicks in.

Because overall production is expected to be down this year, prices will likely average slightly higher than last year, particularly for peaches and nectarines. Tables 13-15 provide time-series data on production and grower prices for these three types of stone fruit. Lower supplies and higher domestic prices will likely

limit the prospects of increased domestic consumption and exports of peaches and nectarines during 2003. At the same time, the reverse may be experienced for plums. During 2002, domestic consumption of fresh peaches (including nectarines) rose 3 percent from the previous year, to 5.36 pounds per person, with increases in peach production and a record-large nectarine crop. For the same period, reduced production led to a 6-percent decline in domestic consumption of fresh plums, estimated at 1.24 pounds per person.

The overall export market was bleak last year even with the ample supplies available. Combined peach and nectarine exports declined 7 percent during 2002 from a year ago, to 271.9 million pounds. Decreased exports to leading markets--Taiwan, Mexico, and Hong Kong--outweighed a 10-percent increase in exports to the number one market, Canada, and a sharp rise in exports to New Zealand. There were also fewer plums exported overall, with lower volumes sent to Taiwan and Hong Kong, two major markets. Shipments were also sharply lower to other export markets in South and Central America, the United Kingdom, and China.

Table 13--Peaches: Production, utilization, and season-average grower price, California

Year	Production 1/	Utilization		Grower price	
		Fresh	Processed	Fresh	Processed 2/
		--Million pounds--		--Dollars/pound--	--Dollars/ton--
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	1,677	538	1,139	0.21	244.00
2002	1,870	556	1,314	0.21	247.00

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 14--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
2002	299,000	299,000	--	383.00	--

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

Source: National Agricultural Statistics Service, USDA.

Table 15--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	306.00	64,362
2002	200,000	386.00	77,200

Source: National Agricultural Statistics Service, USDA.

Citrus, Almond Update

NASS released new data for both the 2003 citrus and almond crops on May 12, 2003. The May *Crop Production* report provided the first 2003 almond crop estimate. According to the survey of growers conducted by the California Agricultural Statistics Service, the 2003 crop will produce 920 million pounds of almonds, shelled basis, 15 percent below the revised 2002 record crop. The first estimate of the season, called the subjective forecast, is revised in June. The smaller crop is a result of an estimated 15 percent decline in yields because of cool, wet weather during the bloom and pollination period. Also, the trees have been producing two big crops in a row and many of the trees may be going into their alternate-bearing behavior as the trees replenish themselves. The Nonpareil variety, which accounts for about 40 percent of all production, are reported to have one of the weakest blooms in years.

Last season's final estimate of 1,085 million pounds is 15 percent above the initial, subjective forecast from last May. The revised crop size is even higher than the objective forecast and has set another record for California's almond growers. Despite the very large crop, movement has been strong this season, enabling growers to maintain strong prices. According to the Almond Board of California, shipments from August 2002 through April 2003 have been running 16 percent ahead of last season during the same time period. Domestic shipments have been 25 percent ahead of last season and exports 13 percent ahead. Although there has been strong movement so far, the inventory is 50 percent higher than the previous season in April. With demand so strong, the industry will need a large supply at the beginning of the 2003/04 season to meet market needs, if the final crop size turns out to be near the estimate, likely reducing the size of this season's ending inventories. August-April exports of shelled almonds were up to the industry's North American markets, and to its major Asian markets, Japan and China. Shipments to the number one market, Spain, however, have been running behind last season.

NASS also revised its citrus numbers this month. The estimate for this season's grapefruit utilized production fell 2 percent, to 2.068 million tons, due to a smaller-than-expected harvest out of Florida. While the estimate of white grapefruit increased 3 percent to 701,000 tons, if realized it would be the smallest harvest since 1989/90. The colored-varieties grapefruit estimate fell 6 percent from last month and would be the smallest crop since 1991/92. The slowing down of the harvest over the past month contributed strongly to the new forecast of the amount that would be utilized this season. As of the May survey, about 8 percent of the white grapefruit and 4 percent of the colored grapefruit remained to be harvested. Among the citrus crops, only the grapefruit is not fully utilized each year.

The estimate for Florida's Valencia orange crop increased 2 percent from the previous month. If realized, it would be 14 percent smaller than last season's crop. This season's Valencia crop is producing record large-sized fruit. The continued growth in fruit size pushed up the estimated number of boxes of fruit.

At the same time that the size of Florida's orange crop forecast was increased, the juice yield per box of fruit fell 1 percent to 1.53 gallons per box at 42^0 Brix. The yield of the early- to mid-season oranges stayed the same at 1.49 gallons per box. The season is over for these oranges and the estimate is final. The estimate for the Valencia oranges fell from 1.65 gallons per box last month to 1.58 gallons in May. As a result of the decline in juice yields forecast for this season, the quantity of orange juice expected to be produced has been lowered fractionally to 1.251 billion gallons, single-strength equivalent. If realized, per capita consumption is likely to fall slightly to 5.35 gallons per person. This rate of consumption, however, would still be higher than either of the past two seasons.

Exports of Key U.S. Fresh Fruit Mixed in 2002/03

Of the major citrus fruit, U.S. exports of fresh oranges have remained strong during the 2002/03 season through March relative to the same period last season, while fresh grapefruit exports were nearly unchanged (table 16). Lemon exports, on the other hand, have been lower despite increased production. For both oranges and grapefruit, good quality and relatively lower prices than last season have helped boost export demand. However, while the larger California orange crop increased the availability of fresh oranges in the market this season, this is not the case for grapefruit. The 2002/03 U.S. grapefruit crop is 15 percent smaller. Season-to-date grapefruit exports were up only fractionally from a year ago, increasing moderately to its top market, Japan, but declining to other leading markets such as Canada, France, Germany, and the United Kingdom.

Shipments were also down to key markets in Asia, particularly to Taiwan and Hong Kong. Meanwhile, U.S. fresh orange exports were up 13 percent to its largest market, Canada, and up sharply to important markets such as South Korea, Malaysia, and Mexico. Significant increases in lemon shipments to Canada and China were not enough to offset the large decline in the U.S. lemon industry's largest export market, Japan.

Smaller apple, pear, and sweet cherry crops in 2002 limited the available supplies for export during the 2002/03 season. As a result of reduced supplies, domestic prices averaged higher, having a negative effect on export demand. For apples, exports were also affected by limited shipments to Mexico, the largest foreign destination for U.S. apples. All Washington Red and Golden Delicious apples are now charged a 46.58-percent antidumping duty when sold in Mexico. U.S. apple exports to Mexico for the

Table 16--U.S. exports of selected fruit and tree nut products

Commodity	Marketing season	Season-to-date (through March) 2002	Season-to-date (through March) 2003	Year-to-date change
		--- 1,000 pounds ---		Percent
Fresh-market:				
Oranges	November-October	609,185	715,836	17.5
Grapefruit	September-August	669,547	672,281	0.4
Lemons	August-July	151,785	138,357	-8.8
Apples	August-July	999,178	831,076	-16.8
Grapes	May-April	653,194	695,126	6.4
Pears	July-June	325,860	298,536	-8.4
Peaches (including nectarines)	January-December	7,271	6,952	-4.4
Strawberries	January-December	21,613	40,384	86.9
Sweet cherries	January-December	868	186	-78.6
		--- 1,000 gallons ---		
Processed:				
Orange juice, frozen concentrate	October-September	61,790	18,350	-70.3
Orange juice, not from concentrate	October-September	24,289	28,027	15.4
Grapefruit juice	December-November	9,483	12,457	31.4
Apple juice and cider	August-July	4,840	3,721	-23.1
Wine	January-December	16,225	22,752	40.2
		--- 1,000 pounds ---		
Raisins	August-July	167,065	172,844	3.5
Canned pears	June-May	10,279	9,137	-11.1
Canned peaches	June-May	4,620	39,528	755.6
Frozen strawberries	January-December	10,602	4,181	-60.6
		--- 1,000 pounds ---		
Tree nuts:				
Almonds (shelled basis)	August-June	495,894	554,632	11.8
Walnuts (shelled basis)	August-July	86,585	90,636	4.7
Pecans (shelled basis)	July-June	15,827	21,234	34.2
Pistachios (shelled basis)	September-August	16,961	19,208	13.2

-- = No data.

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

current season to date are down 36 percent from the same period during the 2001/02 season and lower than any of the previous four seasons.

U.S. fresh grape exports were at a record high for the 2002/03 season to date, relative to the same period in previous seasons. Strong export demand resulted in moderate to large increases in fresh grape shipments to its top four foreign destinations—Canada, Hong Kong, Mexico, and Malaysia. Exports were also strong to other smaller markets in Asia, including Singapore, Indonesia, Vietnam, and Thailand, and to certain Central and South American countries, particularly Guatemala and Ecuador. Shipments to Australia, the newest market for U.S. grapes, registered at 2.6 million pounds, the industry's 24th largest export shipment for the season thus far.

Overall U.S. orange juice exports are now down 45 percent due to a sharp decline in shipments of frozen concentrated orange juice (FCOJ). Not-from-concentrate orange juice exports currently exceed the quantity shipped for FCOJ.

U.S. apple juice exports continue on a downward trend as juice supplies dwindle. In recent years, a combination of reduced supplies and low domestic prices for processing apples and increased competition from lower-priced apple juice imports have discouraged growth in U.S. apple-juice production. Although exports remain strong to North American partners, Canada and Mexico, shipments are down sharply to many important Asian markets, including Japan, Hong Kong, Taiwan, and Singapore.

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

Commodity	Marketing season	Season-to-date (through March) 2002	Season-to-date (through March) 2003	Year-to-date change
		--- 1,000 pounds ---		Percent
Fresh-market:				
Oranges	November-October	30,340	15,112	-50.2
Tangerines (including clementines)	October-September	125,566	165,175	31.5
Lemons	August-July	52,662	37,624	-28.6
Limes	September-August	123,843	324,123	161.7
Apples	August-July	114,828	134,881	17.5
Grapes	May-April	882,278	994,134	12.7
Pears	July-June	113,753	135,166	18.8
Peaches (including nectarines)	January-December	99,217	120,102	21.1
Bananas	January-December	2,068,370	2,142,022	3.6
Mangoes	January-December	103,809	86,619	-16.6
		--- 1,000 gallons ---		
Processed:				
Orange juice, frozen concentrate	October-September	87,684	140,954	60.8
Apple juice and cider	August-July	230,566	232,747	0.9
Wine	January-December	31,034	36,844	18.72
		--- 1,000 pounds ---		
Canned pears	June-May	20,422	26,564	30.1
Canned peaches	June-May	112,114	92,607	-17.4
Canned pineapple	January-December	151,067	175,051	15.9
Frozen strawberries	January-December	32,815	49,465	50.7
		--- 1,000 pounds ---		
Tree nuts:				
Brazil nuts (shelled basis)	January-December	4,713	2,039	-56.7
Cashews (shelled basis)	January-December	46,781	53,211	13.7
Pine nuts (shelled basis)	January-December	2,138	1,745	-18.4
Pecans (shelled basis)	July-June	27,804	32,883	18.3

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

Imports Up for Many Fresh Fruit in 2002/03

U.S. imports are up so far this season for a number of fresh-market fruit (table 17). Increased apple and pear imports have been particularly affected by reduced domestic production. Most of the grapes and peaches imported from foreign suppliers are marketed here during the U.S. off-season (late fall and winter season), and are mostly from Chile. Grape and peach imports from Chile alone were up 10 percent and 21 percent for the season thus far compared with the previous season. Mexico accounted for nearly one-fourth the total quantity of grapes imported during the 2002/03 season through March, with shipments up 33 percent. Because they ship grapes into the U.S. market during the spring, most of their shipments for the current season reflect shipments from last spring. The 2002 grape crop in Mexico was 6-percent larger than the previous year, aiding in boosting the country's grape exports last spring. Mexico's fresh grape exports in 2003, however, are forecast by the U.S. Department of Agriculture's Foreign Agricultural Service to decline 11 percent from a year ago, mainly due to a decline in production.

U.S. lime imports continue to increase. The near absence of domestic production and the growing immigrant population in the United States, particularly those from Latin American countries where lime is an essential ingredient in the cuisines, are factors behind the strong growth in lime imports beginning in the early 1990s. Currently, imports are up sharply from the number one supplier, Mexico, as well as from other Latin American suppliers such as El Salvador and the Dominican Republic. Elsewhere, imports rose 33 percent from Iran. Current tangerine imports are also up sharply, following the removal of the U.S. ban on imports of Spanish clementines on October 15, 2002, before the height of its shipping season.

Pecans: The Native Tree Nut

Pecans are the only native tree nuts grown for commercial use in the United States. The other major tree nuts have their origins in Asia, the Middle East, and Australia. The black walnut is also a native American tree, however, its commercial production is very limited. Almost all the walnuts grown commercially in the United States are of the English walnut variety, originating in Iran.

Pecan production also differs from the other domestic tree nuts. Most of the other nuts are grown in concentrated areas, with the greatest concentration located in the Central Valley in California. Pecan production, on the other hand, is dispersed throughout many of the southern and southwestern States. The major production is from Georgia, Texas, and New Mexico. Other big producers include Arizona, Oklahoma, Alabama, and Louisiana. The United States Department of Agriculture's National Agricultural Statistics Service reports 14 States produce commercial pecan crops.

The pecan tree is native to the southwestern United States, along the Mississippi River up to Indiana and Illinois, and into Mexico. As a result, the United States ranks number one in the world in pecan production, with Mexican production ranking second, and growing. Chihuahua is Mexico's leading producer, accounting for about 70 percent of the country's crop. Smaller crops are also produced in Australia, Brazil, Israel, Peru, and South Africa.

Pecan production in the United States is divided into two groups, trees that are classified as native/seedling varieties and improved varieties. The improved varieties of pecan trees have accounted for over three-quarters of national production over the past 3 years.

The native/seedling variety is self-setting or grown from seed into a seedling. These trees have not been grafted or budded as are many fruit and nut trees today to obtain maximum production consistency and favorable attributes in the final product. Commercial varieties have been improved through selective breeding and grafting. Because the improved varieties have been created using the best attributes of the tree, the nuts are larger and yields are higher. While both varieties are alternate bearing in nature, producing a large crop one year followed by a smaller crop the next year, native trees exhibit more alternate-bearing patterns, often producing extreme shifts in production levels from year to year.

Georgia Produces the Most Pecans in the United States

Georgia accounts for about a third of the U.S. pecan production during normal production years. In a year, such as 2002, where Georgia's crop declined sharply as a result of adverse weather conditions and the off cycle of production, its share of the national total fell to 25 percent. Improved varieties account for more than three-fourths of the State's crop.

Texas is the second biggest pecan producer in the United States, followed closely by New Mexico. According to the 1997 Census of Agriculture, Texas accounts for a third of all the pecan farms, acreage, and trees planted in the United States. In fact, Texas has almost twice the number of trees planted as Georgia, the State with the second greatest number of trees. While improved variety trees account for about two-thirds of Texas' production, the native/seedling varieties are still very prevalent in the State. There are many small growers, harvesting crops from small groves and even from backyard production.

New Mexico's pecan production is new, relative to Texas, and all of its production is from improved varieties. While it accounts for only 6 percent of the acreage, it accounts for about 12 percent of the trees. New, improved varieties do not need as much space between trees and can be more closely planted than the native varieties. As such, fewer acres are needed to produce a crop comparable in size to the bigger States. In 2001 and 2002, New Mexico's production accounted for about a fifth of the national total.

Oklahoma has the third greatest number of farms and acreage planted to pecans. Its production, however, ranks about fifth place because its crop is heavily reliant on native/seedling varieties.

The Pecan-Production Area is More Dispersed and Farms Are Often Smaller Than for Other Tree Nut Crops

Due to the large amount of native/seedling variety trees in pecan production today, there are more farms involved in pecan production than all other tree nut farms aggregated (according to the 1997 Census of Agriculture). For optimum production, the native/seedling varieties need to be planted with more space between them than most other commercially grown nut trees. As a result, pecan acreage is high, with more acreage in production than any other nut trees except almonds. In terms of quantity produced, however, pecan production ranks third, behind almonds and walnuts.

The geographic dispersion of native pecan production makes it difficult to survey and as a result there is no annual national level data on pecan acreage. A commercial pecan grower can have anywhere from a few trees in the backyard to many acres. Acreage, however, is reported by the Census of Agriculture. According to the 1997 Census of Agriculture, the average farm consists of 26 acres, with only Georgia farms, among the major producers averaging more acres than the national average.

The typical pecan orchard averaged 19 trees per acre, according to the Census data. Georgia averaged 15 trees per acre, while New Mexico with only improved varieties, averaged 42 trees per acre. The planting pattern for improved pecan trees is similar to the English walnut with an average of 44 trees per acre, but much lower than either almonds or pistachio plantings that average 90 and 116 trees, respectively.

Due to the wider spacing between trees in native/seedling pecan groves, many producers also include livestock grazing as part of their management programs. Intercropping with other crops, such as vegetables and field crops is also common, especially in the spring before the trees form their leaf canopy. By incorporating other commodities growers are able to improve their returns on their pecan acreage.

Most of Pecan Crop Sold During the First Few Months Following the Harvest

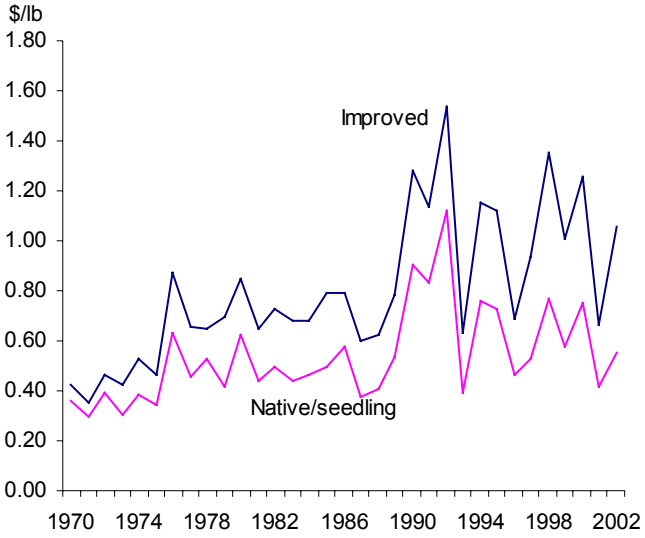
Unlike other tree nuts, pecan growers usually sell their crop right after harvesting. Because so many producers are small, they do not have the proper facilities to store their crop and sell it throughout the year, which could help stabilize and/or boost prices.

Instead, growers sell their nuts, in-shell to accumulators. Accumulators act as brokers who sell the nuts to shellers and pay the growers a percentage based on the final price they receive for the crop. In turn, shellers sell the processed (shelled nuts) to end users, such as confectioners, ice cream makers, and similar products. Industrial end users account for almost 90 percent of the market.

Nut Attributes Important Factor In Determining Grower Price

The price growers receive for their pecans depends on the crop's quality as well as the size of production for the year. Quality is determined by the percentage of kernel in the shell, the color of the kernel, with light brown color being more highly favored, shell thickness, and the oil content of the kernel. Improved variety pecans tend to have more of the favorable attributes demanded from pecans and as a result they command a higher price (fig. 5). Both the light color and the more-perfect halving of these varieties make them more highly demanded by the retail sector, further increasing prices. Improved varieties also

Figure 5
Pecans: Seasonal average grower prices by variety, 1970-2002



Source: National Agricultural Statistics Service, USDA.

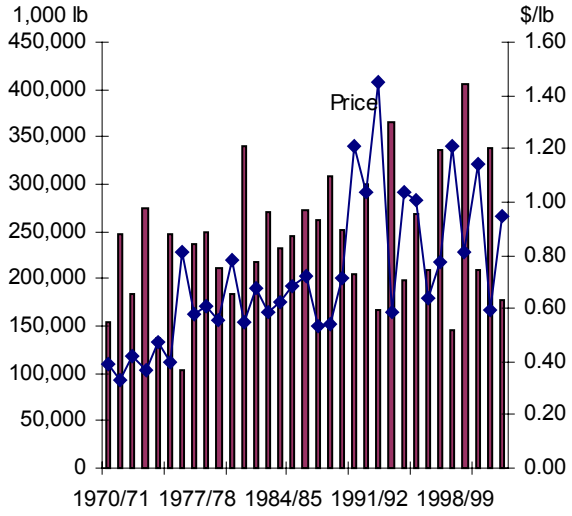
have thinner shells, a favorable attribute for shellers because they reduce processing costs since a nut needs fewer hits to release the kernel from the shell. Offsetting the higher returns to improved variety growers is the higher cost of managing the orchards, compared with managing a native grove.

Production Extremes Increasing In Recent Years

While alternate-bearing production is common for nut trees, and pecans in particular, in recent years, the swings in the size of the annual pecan crop has grown more extreme (fig. 6). As a result, price swings have also increased. The increase in swings is largely due to improved variety trees planted in the early nineties becoming mature. Once the trees mature, growers need to control the size of the orchard canopy to allow the maximum amount of sunlight to get through to the trees and provide enough light for the trees to maximize nut production. Many growers, however, have not been doing the necessary pruning, partially due to reduced prices lowering the amount of inputs, including labor, into orchard management. Hence, both production and price have grown volatile in recent years.

Figure 6

Pecan production and grower price, 1970/71-2002/03f



f = forecast.
Source: National Agricultural Statistics Service, USDA.

As a result of the strong production and price correlation that have become quite evident in recent years, end users have increasingly shifted their purchases to big crop years when prices will be lower. As a result, they have reduced purchases during the off years, which has been putting downward pressure on prices during those years when they would normally be higher. In response to this trend, many growers of native variety trees are putting less management time and inputs into their groves during the off season, which may affect production down the road. Growers of improved varieties need to continue their management practices if they are to benefit from planting improved varieties.

Pecan Prices Peaked in the Nineties

Pecan grower prices were the highest in the early nineties when returns averaged $1.23 per pound. Prices grew at an average rate of 12 percent annually throughout the nineties. The rapid growth has continued in recent years, and over the past 3 years, growers have been experiencing an annual growth averaging 17-percent since 2000. The rapid growth in prices in the nineties is likely a result of the increased proportion of the crop that is the higher valued, improved variety. Since the late nineties, improved variety pecans comprised about three-quarters of the annual crop. In the seventies, they accounted for for only about half of production.

As a result of improved prices for growers beginning in the nineties, pecan growers began receiving higher prices for their nuts than have producers of several of the other major, domestically produced tree nuts. Since 1990, on a per-pound, shelled basis, pecan grower prices have been higher than they have been for walnuts, almonds, and hazelnuts. Only prices for macadamia nuts and pistachios averaged higher.

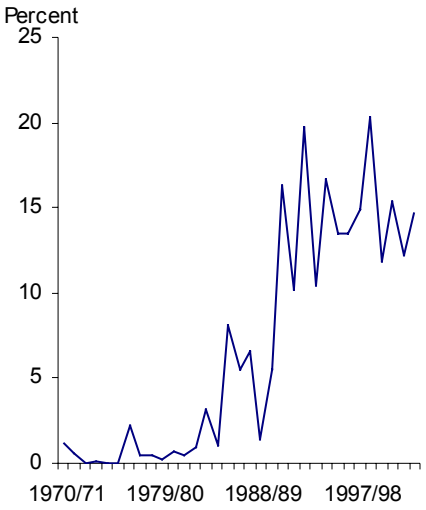
The value of the pecan crop has averaged $257 million annually over the past 3 years. The crop reached its peak value in 1999/2000 at $330 million when a record crop was produced following a low production year. As a result, while prices fell cyclically since then, they were still strong. Since 1999/2000, crop value has returned to more normal levels.

Imports Increasingly Important Part of the U.S. Market

The U.S. market has become increasingly reliant on pecan imports, almost all from Mexico, to fulfill supply needs. Until the mid-eighties, the United States had been a net exporter of pecans, however, since then imports shot up, and have been increasing since the mid-nineties. Mexican pecans are reported to be of high quality since much of what is exported is from improved variety trees. The lower humidity in Mexico's production region, compared with Georgia and Texas, produces a light-color nut and high percentage of kernel to shell, commanding higher prices than growers would receive on the Mexican market. As a result, Mexico ships its best pecans to the United States, leaving the lower quality nuts for its domestic markets. If domestic supplies are low, imports of lower-quality pecans from the United States are brought in to make up the difference.

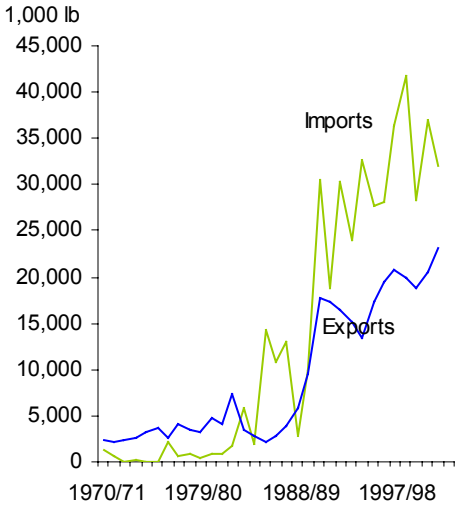
Imports as a share of domestic supply have increased from less than 1 percent in the early seventies to an average of 14 percent during the past three marketing seasons (fig. 7). The growth in Mexico's production, along with the volatility of the U.S. crop, and increased international demand for U.S. pecans have all driven the rising imports.

Figure 7
Pecan imports as a share of domestic supply, 1970/71-2002/03



Source: Economic Research Service, USDA.

Figure 8
U.S. pecan trade, 1970/71-2001/02



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

Export Markets Also Growing Demand for Pecans

While the nineties saw a growth in imports of pecans into the United States, it was also a time when exports began to take off. While imports grew very rapidly in the seventies and eighties, the trend has slowed in recent years, with an average increase of 2 percent since the mid-nineties (fig. 8). Exports, on the other hand, have grown an average of 9 percent annually and show less variability from year to year. Similar to Mexico, U.S. shellers are likely selling their highest quality pecans overseas to get the highest prices and importing from Mexico to make up the difference as well as to reduce the valley and peaks in domestic supply.

Mexico is the major market for in-shell pecan exports. It usually purchases about three-quarters of all the in-shell pecans that the United States exports, with some years being lower depending on its own crop size. Over the past 2 years, China's markets have been growing rapidly. In-shell pecan exports to China were nonexistent until 1999/2000 and as of March 2003, it has become the second biggest market. Hong Kong has periodically received pecan shipments throughout the nineties, but its demand for the nuts has grown substantially recently.

Canada and the European Union are the biggest customers for shelled pecans outside the United States. Canada typically accounts for about 40

percent of the pecan shipments over the past several years. For the present marketing season through March, however, Canada's share has declined as shipments have leaped to Hong Kong and Mexico.

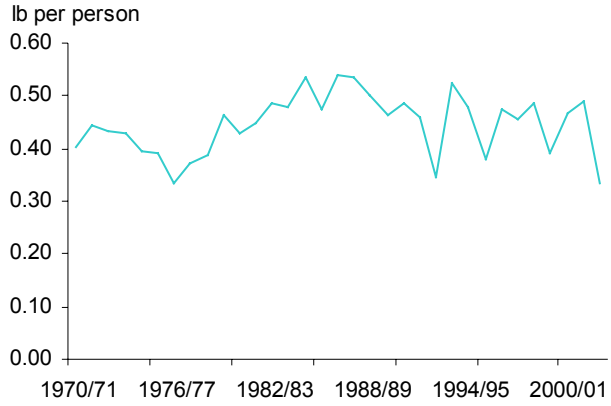
It appears that China has the potential in the future to become an increasingly important market for pecans. The Mexican market may also be shifting some of its demand to the more higher-valued products as incomes rise within the country.

Pecans Are the Second Most Popular Tree Nut Among Consumers

Per capita pecan consumption averaged 0.48 pound annually since 2000, slightly greater than walnut consumption but behind that of almonds. Pecan consumption has remained relatively stable over the past 30 years despite increased competition from other tree nuts due to the tremendous growth in almond and slower, but steady increase in walnut production (fig. 9). Domestic pistachio production was also introduced into the United States about 25 years ago and has grown rapidly. The movement towards increased production of improved, higher quality pecans has helped in maintaining consumption levels. Also, a big contributing factor is the traditional use of pecans in recipes during the fall and winter holidays, where substitutes are less acceptable.

Figure 9

Annual average per capita pecan consumption, 1970/71-2002/03 f



f = forecast.
Source: Economic Research Service, USDA.

Contacts and Links

Contact Information

Agnes Perez	Noncitrus fruit	(202) 694-5255	acperez@ers.usda.gov
Susan Pollack	Citrus fruit and tree nuts	(202) 694-5251	pollack@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).

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.