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## Fruit and Tree Nuts Outlook

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### 2005 Strawberry Production Forecast Up in Two Major States, California Peach Supplies Down

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The April 2005 index of prices received by fruit and tree nut growers was the highest index for any April in the last 5 years. The strong index mostly reflects the higher prices received for citrus fruit, particularly for grapefruit, oranges, and tangerines. Grower prices were also higher for fresh-market pears and strawberries. The price gains drove the index higher despite the lower prices received for lemons and apples. At the retail level, higher citrus prices in April were more than offset by the lower prices consumers paid for Red Delicious apples, bananas, Thompson seedless grapes, and strawberries.

Commercial strawberry production in two major producing States, California and Florida, is forecast to total 2.2 billion pounds in 2005, up 2 percent from a year ago. In California, the crop is forecast to be 2 percent larger, reaching a record 1.99 billion pounds. California's strawberry season started slow this year due to heavy rainfall. Lower prices earlier in the year, due to the lack of consistency in fruit quality and increased shipments from Florida and Mexico, pulled the January-April strawberry average grower price slightly below last year. More recent supply gaps are holding prices above a year ago. Florida's strawberry crop this winter increased 10 percent from a year ago, to an estimated 178.9 million pounds.

The U.S. Department of Agriculture's National Agricultural Statistics Service (NASS) forecast the 2005 California peach crop to be 1.84 billion pounds, 3 percent smaller than a year ago. Production data for both California nectarines and plums in 2005 will not be available until January 2006 but pre-season estimates from the California Tree Fruit Agreement, a grower-funded group that promotes the marketing of fresh-market peaches, nectarines, and plums, indicate that the nectarine crop will be about 4 percent bigger and plum production 16 percent bigger. Despite increased production, only moderate supplies of these fruit are expected in 2005 because the projected increases in production are based on last year's low output.

January-March 2005 imports of bananas and pineapples were lower than in January-March 2004. Lower imports of canned pineapples and pineapple juice drove overall pineapple imports down. Meanwhile, strong domestic demand for papayas and mangoes is being met by increased imports thus far.

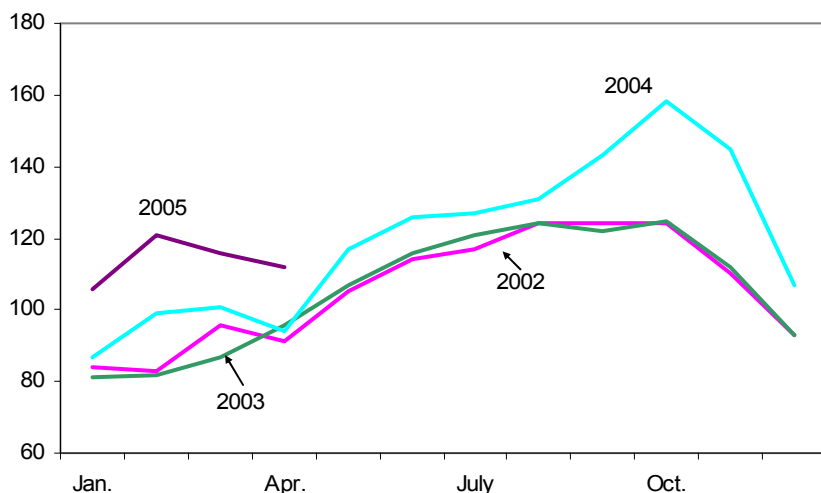
## Price Outlook

### *Grower Prices Higher Than a Year Ago In April for Most Fruit*

The April 2005 index of prices received by fruit and tree nut growers held strong relative to the April 2004 index (fig. 1). The index of 112 (1990-92=100) is the highest index for any April in the last 5 years. The strong index mostly reflects the higher prices received for citrus fruit in April, particularly for grapefruit, oranges, and tangerines (table 1). Grower prices were also higher for fresh-market pears and strawberries. The higher citrus prices are a result of reduced crops of grapefruit, processing oranges, and tangerines and sporadic supply gaps in the fresh orange market due to rains in California. These rains also created temporary supply shortages in the strawberry market, driving prices higher. Meanwhile, a smaller 2004 pear crop has continued to put upward pressure on fresh pear prices. All the above price gains drove the index higher despite lower prices received for lemons and apples.

The April average grower price for lemons fell below a year ago for the first time this season, although it remained fairly strong relative to earlier years. Market demand was strong for fresh-market apples, but continued large inventories as a result of the large 2004 crop kept the average price lower as it has since October 2004. As of May 1<sup>st</sup>, fresh apple inventories were running 46 percent higher than the same period a year ago and 23 percent higher than the 5-year average. With the industry still needing to move plenty of supplies to the market 2 months away from the end of the season, weak prices are likely to remain for the remainder of the marketing season.

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



Source: National Agricultural Statistics Service, USDA.

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

Commodity	2004		2005		2004-05 Change	
	March	April	March	April	March	April
	--Dollars per box--				Percent	
Citrus fruit: 1/						
Grapefruit, all	2.38	2.11	9.85	9.05	313.9	328.9
Grapefruit, fresh	7.52	7.14	16.87	17.25	124.3	141.6
Lemons, all	7.37	9.69	7.39	9.61	0.3	-0.8
Lemons, fresh	14.26	16.86	15.57	16.77	9.2	-0.5
Oranges, all	3.68	3.68	4.26	5.02	15.8	36.4
Oranges, fresh	8.79	8.07	8.96	8.96	1.9	11.0
	--Dollars per pound--					
Noncitrus fruit:						
Apples, fresh 2/	0.30	0.30	0.19	0.17	-38.8	-43.0
Grapes, fresh 2/	--	--	--	--	--	--
Peaches, fresh 2/	--	--	--	--	--	--
Pears, fresh 2/	0.17	0.18	0.25	0.26	49.4	41.7
Strawberries, fresh	0.69	0.52	0.72	0.67	4.2	28.2

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.

The California and Arizona Valencia orange crops this summer are expected to be 10 percent and 28 percent larger, providing plenty of supplies to the fresh market and weakening fresh-market orange prices. Meanwhile, continued lower supplies of Florida Valencia oranges, due to the hurricanes last year, will likely keep processing orange prices strong through the remainder of the season. Processing orange prices have been averaging sharply higher than a year ago since January.

### ***Retail Fresh Fruit Prices Lower Than a Year Ago***

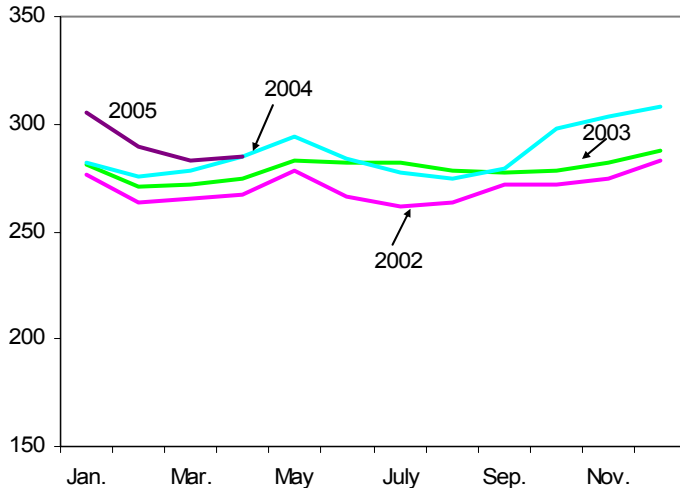
The Consumer Price Index (CPI) for fresh fruit in April was 284.9, compared with 285.2 in April 2004. On a year-to-year comparison, the CPI has been stronger and reached record levels each month since last September until April when it fell slightly below a year ago (fig. 2). At the retail level, higher citrus prices in April relative to the same time last year were more than offset by the lower prices consumers paid for Red Delicious apples, bananas, Thompson seedless grapes, and strawberries (table 2).

The CPI for apples was 12 percent lower this April, suggesting that most apple varieties, besides Red Delicious, were also selling at cheaper prices than last year. Banana imports were lower in April, based on weekly shipment data from the U.S. Department of Agriculture's Agricultural Marketing Service (AMS). However, domestic supplies were still sufficient to fulfill retail demand, keeping April prices nearly unchanged from a year ago. Abundant supplies of fresh grapes and strawberries drove prices lower. AMS reported that grape shipments from Chile in April were over 50 percent more than the quantity shipped from the same time last year. California strawberry shipments, which have been intermittently disrupted by supply gaps so far this year due to heavy rains, were rebounding during the second and third week in April, driving prices lower. Late in the month, however, strawberry harvesting may have been disrupted again by another rain storm that

perhaps also caused some fruit damage as reflected by lower shipments during the last week in April. Already in its typical heavy shipping period, improved weather and an expanded production area should help build up the seasonal increases expected through the summer, and strawberry prices will likely continue to decline. Grape supplies are expected to be light early this spring because recent cold weather has delayed maturity of the Mexican grape crop. Also, heavy rains this winter resulted in disease problems in California's Coachella Valley grape growing region which supplies the domestic market during the spring, along with Mexico. However, industry expectations of larger grape supplies from California and Mexico, discounting the effects of late-April rains to the California crop that have yet to be determined, as well as any other weather problems that may arise during the season which may potentially affect fruit quality, will likely continue to put downward pressure on retail grape prices through the summer.

Figure 2  
**Consumer Price Index for fresh fruit**

1982-84=100



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

Table 2--U.S. monthly retail prices, selected fruit, 2004-2005

Commodity	Unit	2004		2005		2004-05 Change	
		March	April	March	April	March	April
		--- Dollars ---		--- Dollars ---		--- Percent ---	
<b>Fresh:</b>							
Valencia oranges	Lb	--	--	--	--	--	--
Navel oranges	Lb	0.730	0.744	0.783	0.816	7.3	9.7
Grapefruit	Lb	0.670	0.694	0.959	0.983	43.1	41.6
Lemons	Lb	1.140	1.148	1.307	1.350	14.6	17.6
Red Delicious apples	Lb	1.050	1.040	0.920	0.869	-12.4	-16.4
Bananas	Lb	0.500	0.505	0.507	0.503	1.4	-0.4
Peaches	Lb	--	--	1.774	--	--	--
Anjou pears	Lb	--	--	1.102	1.156	--	--
Strawberries 1/	12-oz pint	2.124	1.661	1.877	1.526	-11.6	-8.1
Thompson seedless grapes	Lb	1.581	2.113	1.514	1.869	-4.2	-11.5
<b>Processed:</b>							
Orange juice, concentrate 2/	16-fl. oz	1.829	1.861	1.846	1.918	0.9	3.1
Wine	liter	6.583	6.284	7.166	--	8.9	--

-- Insufficient marketing to establish price.

1/ Dry pint.

2/ Data converted from 12 fluid ounce containers.

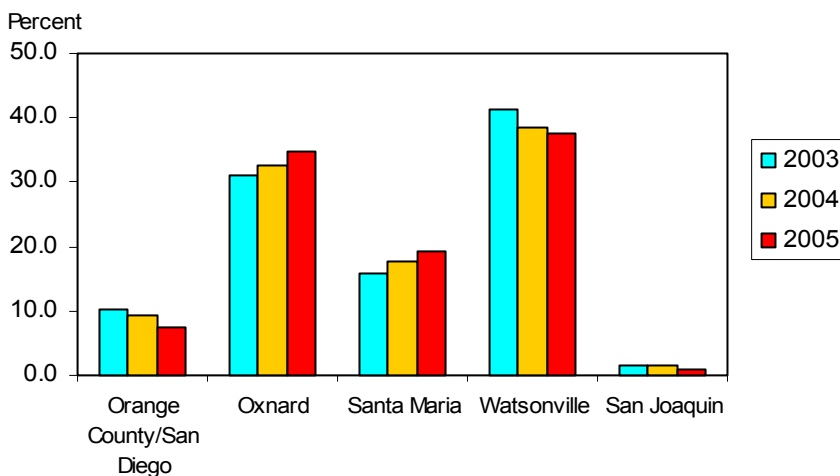
Source: Bureau of Labor Statistics, U.S. Department of Labor.

## 2005 Strawberry Production Forecast To Increase

On April 1st, USDA released its 2005 forecast for commercial strawberry production in two major producing States, California and Florida. The combined production for 2005 in these two States is forecast at 2.2 billion pounds, up 2 percent from a year ago. In California, the crop is forecast to be 2 percent larger, reaching a record 1.99 billion pounds. The hurricanes in the fall of 2004 delayed plantings of this past winter's Florida strawberry crop, but production increased 10 percent from a year ago, to an estimated 178.9 million pounds, due to higher yields (up 3 percent) and increased acreage (up 7 percent). Official forecast for production in Oregon, the third largest strawberry-producing State in the country, is not yet available, but persistent dry conditions are likely to reduce production in the State this year. USDA forecast Oregon's strawberry harvested acreage to decline from 2,400 acres in 2004 to 2,100 acres this year.

Although average yields in California have been declining from the record average achieved in 2003, continued expansion in harvested area is behind this year's production growth. Based on USDA figures, California growers expect an additional 1,100 acres to this year's harvest, for a total of 34,300 acres. The Watsonville/Salinas area is still the State's largest strawberry growing district, according to the results of the 2005 Acreage Survey by the California Strawberry Commission. This district is expected to account for about 38 percent of the State's total planted acreage, followed by Oxnard (35 percent), Santa Maria (19 percent), Orange County/San Diego (8 percent), and San Joaquin (0.9 percent). Acreage expansion continues to shift north from the southern growing districts, particularly from Orange County where production area growth has been limited by land developments and rising property costs (fig. 3). Oxnard and Santa Maria districts had the largest increases in planted acreage while decreases were reported in Orange County/San Diego and San Joaquin Valley.

Figure 3  
**Strawberry growing districts: Share of California's strawberry acreage**



Source: California Strawberry Commission.

The California strawberry season started slow this year due to heavy rains this winter and spring affecting production mostly in the southern growing district. The rains caused fruit damage and disrupted harvesting schedules, curtailing overall supplies out of California. January fresh strawberry shipments from California, as reported by the Agricultural Marketing Service (AMS) of the U.S. Department of Agriculture (USDA), lagged 24 percent from the same time last year but national-level fresh strawberry grower prices averaged 7 percent lower at \$1.40 per pound, likely due to the lack of consistency in the quality of the California berries and increased shipments from Florida (the main supplier during the winter) and Mexico. As production moved north from the southern districts, total shipments through April were already up 3 percent. January-April grower prices averaged \$0.99 per pound, compared with \$1.00 per pound in January-April 2004. Although prices have already fallen from earlier in the season due to increased volume, March and April prices averaged higher than the same time last year as cool weather in late March-early April slowed maturity of the strawberries growing in California's San Joaquin Valley. Also rains in late April again caused some supply disruptions, bringing California shipments for the month down 3 percent from the same time last year and continuing lower into May.

Florida's season finished by mid-April while shipments from Mexico remained above a year ago overall. F.o.b. shipping-point prices for a flat of 12 1-pint basket of strawberries as of mid-April ranged from \$7.90-\$8.90 for large to extra-large strawberries in the Salinas-Watsonville district and \$6.90-\$7.90 for medium-large berries in the Santa Maria and South District growing areas. These prices are \$2.00-\$3.00 higher than those quoted around the same time last year. Prices have remained stronger than a year ago through the second week in May and even moved higher than prices quoted in mid-April. With improved weather conditions, supplies could recover and continue its upward seasonal trend, likely putting downward pressure on prices in the coming months. The heaviest shipments from California usually run from April through July.

Low supplies, high prices, and a wide range in quality for California-grown strawberries during the first 3 months of 2005 limited shipments to foreign markets. January-March fresh strawberry exports, mostly shipped to Canada, were 14 percent lower than the same time last year. Exports to other important markets such as Japan, Hong Kong, and Mexico posted larger declines.

This year's processing strawberry supplies in the United States are running below a year ago likely due to strong demand in the fresh market. U.S. cold storage holdings of frozen strawberries (including juice berries) as of March 31, 2005, were estimated at 173.3 million pounds, 3 percent below the same time last year. Cumulative freezer tonnage of Grade No. 1 California berries through early May was down 46 percent and supplies of juice berries were down 35 percent, according to data from the Processing Strawberry Advisory Board of California. Imports partially supplement the lower domestic supplies. U.S. imports of frozen strawberries during the first 3 months of the year totaled 51.8 million pounds, up 21 percent from the same time last year. Shipments from Mexico rose 19 percent and accounted for an overwhelming share of the imports. Imports, however, rose more sharply from Argentina (up 167 percent) and China (up 227 percent). As overall frozen strawberry supplies continue to be tight, processing strawberry prices are

likely to improve over last year when U.S. growers received about 26 cents per pound on average.

### ***2005 California Peach Crop Forecast Smaller, Nectarine and Plum Production Larger***

This has been a very wet growing season for California tree fruit orchards. A number of storms swept through California's Central Valley, the center of production for peaches, nectarines, and plums. With some of these storms occurring during the bloom period, growers were wary of its effects on their 2005 crops. Pollination of the plum flowers were affected the most because plum trees, unlike peach and nectarine trees, are not self pollinating. This means that bees are needed in order to pollinate the trees, and rainy conditions often discourage bee activity. According to the California Tree Fruit Agreement (CTFA), a grower-funded group that promotes the marketing of fresh-market peaches, nectarines, and plums, the early-season peach and nectarine crop had a normal fruit set but the late-season crop may be lighter. Meanwhile, production of early-season plum varieties appears light but the late-season varieties will likely develop into a moderate-size crop.

The U.S. Department of Agriculture's National Agricultural Statistics Service forecast the 2005 California peach crop to be 1.84 billion pounds, 3 percent smaller than the 2004 crop. Production of freestone peaches, mostly for fresh use, is forecast at 820 million pounds, unchanged from last year. Production of clingstone peaches, used mostly for processing, is forecast to decline 5 percent, to 1.02 billion pounds. Table 3 shows a historical series of utilized peach production in California. Production data for both California nectarines and plums in 2005 will not be available until January 2006. However, pre-season estimates from CTFA indicate that the nectarine crop will be about 4 percent bigger and plum production 16 percent larger. Despite increased production, only moderate supplies of these fruit are expected in 2005 because the projected increases in production were based on 2004's low output (tables 4 and 5).

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

Year	Production 1/ --Million pounds--	Utilization		Grower price	
		Fresh --Million pounds--	Processed	Fresh --Dollars/pound--	Processed 2/
1990	1,555	384	1,171	0.22	0.11
1991	1,597	402	1,195	0.16	0.11
1992	1,759	430	1,329	0.14	0.11
1993	1,640	386	1,254	0.19	0.11
1994	1,717	440	1,277	0.12	0.09
1995	1,323	323	1,000	0.24	0.11
1996	1,715	459	1,256	0.28	0.11
1997	1,839	498	1,341	0.14	0.13
1998	1,712	432	1,280	0.20	0.11
1999	1,792	508	1,284	0.20	0.11
2000	1,808	538	1,270	0.19	0.13
2001	1,677	538	1,139	0.21	0.12
2002	1,870	556	1,314	0.21	0.12
2003	1,837	565	1,272	0.20	0.11
2004 3/	1,856	516	1,340	0.17	0.13

1/ Utilized production. 2/ Prices are only for clingstones which represents over 80 percent of all California peaches processed. 3/ Preliminary.

Source: National Agricultural Statistics Service, USDA.

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

Year	Production 1/ --Short tons--	Utilization		Grower price	
		Fresh --Short tons--	Processed	Fresh --Dollars/ton--	Processed
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	300,000	300,000	--	382.00	--
2003	273,000	273,000	--	436.00	--
2004 3/	252,000	252,000	--	342.00	--

1/ Production all utilized. 2/ Not published to avoid disclosure of individual operations. 3/ Preliminary.

Source: National Agricultural Statistics Service, USDA.

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

Year	Utilized production	Grower price	Crop 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	201,000	386.00	77,586
2003	209,000	418.00	87,362
2004 1/	144,000	516.00	74,347

1/ Preliminary.

Source: National Agricultural Statistics Service, USDA.

Harvesting of early-season peaches started around the second week in April and nectarines a week later. Picking for plums began in mid-May. As of May 12, 2005, packout numbers reported by CTFA indicate peach and nectarine shipments are down 15 percent and 18 percent from the same time last year, and plum shipments are down 19 percent. While early-season varieties of peaches and nectarines are expected to be a normal-size crop, current supplies are down because the harvest season started later than last year. Relative to other previous years, however, the 2005 stone fruit harvest season is on a normal schedule. Last year, an unusually hot spring sped up maturity of the crop, and this condition affected the ability of the fruit to size, resulting in many small-size fruit. This year, the cool days and nights brought in by the storms aided in achieving better fruit sizing. The wet and cool conditions delayed fruit maturity, allowing the fruit more time to size on the tree and get to a more normal size. Moreover, the industry has also reported good fruit color, and with the hope of improved weather conditions in the coming weeks, fruit should be able to achieve higher sugar levels. All these positive attributes should help promote demand for this year's peaches, nectarines, and plums in both the domestic and export markets.



Recent prices for peaches are running lower than last year, while nectarine prices are higher. As of May 12, various varieties of yellow-flesh California well-matured peaches from the Central and Southern San Joaquin Valley were priced at \$18.00 to \$21.00 (f.o.b. shipping point) for a two-layer tray pack of size 48-50s and \$16.00 to \$18.00 for 54-56s. Around the same time last year, prices ranged from \$24.00 to \$26.00 for 48-50s and \$22.00 to \$24.00 for 54-56s. Various varieties of white-flesh California well-matured peaches were quoted on the same date at \$18.00-\$20.00 for a two-layer tray pack of size 54-56s, compared with \$22.00-\$24.00 the same time last year. Prices for various varieties of yellow-flesh California well-matured nectarines ranged from \$28.00 to \$32.00 for 54-56s, compared with \$26.00-\$28.00 last year. As harvesting gets into full swing, seasonal increases in supplies will likely put downward pressure on prices in the coming weeks. Prices, however, could average stronger than a year ago during the second half of the season as lighter supplies of late-season varieties are expected, especially for peaches and nectarines.

### ***U.S. Banana Imports Catching Up to Last Year***

With almost complete reliance on imports to meet market demand, fresh banana supplies in the United States were down 1 percent during the first 3 months of 2005 from the same period a year ago due mostly to lower imports in January. January imports fell to 649.7 million pounds, down 4 percent from the same period a year ago and the lowest import volume for any January since 1997. Imports in February were up nearly 1 percent but imports in March fell by a fraction. Banana production areas in Costa Rica and Panama experienced heavy rainfall and flooding in early January which have caused heavy damage to their crops. Prior to these, world banana supplies were already lagging behind last year due to lower volumes being shipped from Honduras, Guatemala, and Ecuador.

Costa Rica had been the top banana supplier to the United States in many previous years (table 6) but in 2004, it lost its rank to Guatemala (first) and Ecuador (second). The La Corporacion Bananera Nacional (Corbana), which is Costa Rica's banana association, had estimated that about 14 percent of the country's banana acreage was damaged by the January floods and indicated that it would take about 3 to 9 months before most of these damaged acres regain the ability to produce marketable bananas. In January, U.S. fresh banana imports from Costa Rica declined 14 percent from January 2004, but imports from Panama increased from none to 696,689 pounds. Panama, however, is not as large a supplier of bananas to the U.S. market as is Costa Rica. In 2004, Costa Rica shipped 1.9 billion pounds to the United States, a volume that is significantly lower than in previous years but is far beyond the 1.3 million pounds imported from Panama. U.S. import supplies also declined in January from Honduras (down 13 percent), Ecuador (8 percent), Nicaragua (10 percent), and Peru (11 percent). Although there were more supplies available domestically in March than earlier in the year, overall supplies were down fractionally from a year ago as shipments from Guatemala and Colombia dropped along with continuing lower supplies from Honduras and Nicaragua. Meanwhile, shipments from Costa Rica registered a 7-percent increase.

Table 6--U.S. imports of fresh bananas, excluding plantains, by country, 1995-2004

Country	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Million pounds										
Guatemala	1,022	1,114	1,020	1,443	1,107	1,518	1,834	2,040	2,059	2,258
Ecuador	2,054	1,871	1,925	2,381	2,578	2,152	2,087	2,253	2,144	2,027
Costa Rica	2,112	2,138	2,103	2,405	3,536	3,001	2,386	1,987	2,152	1,914
Honduras	1,285	1,410	1,243	831	184	608	841	990	953	1,124
Colombia	969	841	1,028	915	1,336	1,329	1,045	1,117	1,035	1,024
Nicaragua	1	42	48	129	88	4	62	65	92	91
Other countries	635	910	950	523	633	274	212	161	118	119
World	8,077	8,327	8,317	8,627	9,461	8,886	8,467	8,613	8,552	8,557

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

Tight banana supplies have driven up banana prices in the United States. Banana prices quoted at the Philadelphia wholesale terminal market in January ranged from \$10.50-\$17.00 per 40-pound carton, compared with the range of \$11.00-\$12.00 in January 2004. Although import supplies did not really drop in February, additional costs incurred by some U.S. importers who had to temporarily modify sourcing schedules to meet contractual commitments with retailers continued to put upward pressure on prices. Moreover, U.S. importers are likely under pressure to pay higher prices to maintain supply availability in the domestic market when supplies are already tight in the overall global market and when the weak U.S. dollar is making other foreign markets more attractive to banana exporters. Prices ranged from \$17.50-\$18.00 in February, compared with \$10.50-\$11.50 the same month last year. Prices have declined since then with increases in supplies, but prices have remained strong. As of the second week in May, quoted prices were at a range of \$12.00-\$13.00 per 40-pound carton, compared with \$10.00-\$11.00 the same time last year.

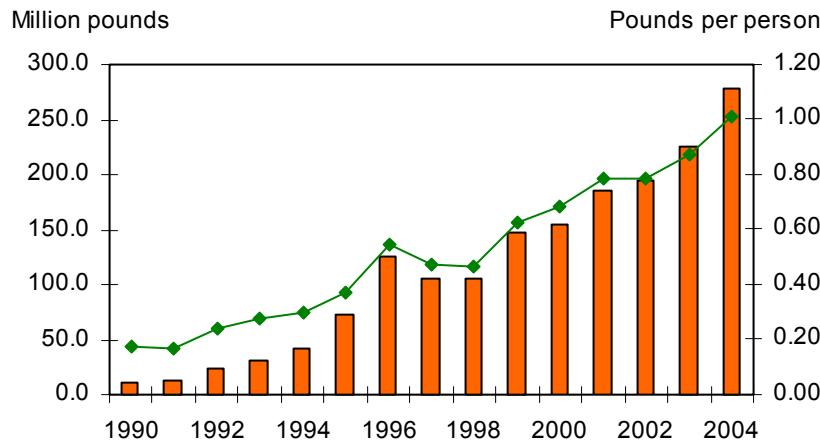
Despite the higher wholesale prices for bananas, U.S. consumers still paid cheaper prices for bananas in January than any January since 1996 when the average retail price was 46.3 cents per pound. The average U.S. retail price for bananas in January was 48.5 cents per pound, down 5 percent from the same period a year ago. Prices strengthened gradually through March, however relative to a year ago there have not been much variation in prices. In 2003, retail banana prices averaged 3 percent lower than the previous year despite lower supplies. Because of the lower supplies, domestic consumption declined 3 percent in 2004 from a year ago, to 25.4 pounds per person. If imports recover fully in the months ahead, per capita banana consumption in the United States could increase in 2005, reversing the trend that has been observed over the last 5 years.

### ***Papaya Imports Higher***

U.S. papaya imports rose for the sixth consecutive year in 2004, boosting the quantity of supplies available for domestic consumption. At 277.8 million pounds, imports last year increased 24 percent from 2003 and made up 89 percent of fresh papaya supplies in the United States. Because of the increase in imports, U.S. fresh papaya consumption reached 1.0 pound per person for the first time historically during 2004, surpassing the previous record of 0.9 pound in 2003 (fig. 4). This

Figure 4

**Fresh papayas: U.S. imports and domestic consumption**



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

rise in consumption indicates positive growth prospects for papaya marketing in the United States as demand continues to trend upwards since the 1990s.

About 75 percent of U.S. papaya imports in 2004 were supplied by Mexico (table 7). With its large production base and its current wide lead in shipment volume, Mexico will likely continue to dominate the U.S. papaya market in the coming years. However, U.S. importers are increasingly sourcing papayas from other foreign suppliers such as Belize and Brazil. In 2004, Belize supplied 19 percent of U.S. papaya imports, up from 2 percent in 1995. For the same period, Brazil's share rose from zero percent to 4 percent. As supplies from other foreign sources grow in share of U.S. papaya supplies, there will likely be more consistent variety choices available in the market that would cater to the different tastes and preferences of U.S. consumers, aiding in boosting domestic papaya consumption in the coming years.

Hawaii's papaya production continues to be largely dwarfed by imports since the mid-1990s and the decline in its production during 2004 had little effect on overall domestic supplies. Although Hawaii's yields were up slightly, a reduction in harvested acreage by as much as 330 acres pushed its 2004 papaya crop down to 35.5 million pounds, 17 percent smaller than the previous year and the smallest crop harvested since the 1980s. The combined effects of the smaller crop and high land and labor costs have led to higher grower prices for fresh-market papayas which represent the bulk of the production share.

Grower prices for Hawaiian-grown papayas remain strong into 2005 as production through April continues to lag the previous year. January-March grower prices averaged 36 cents per pound, 8 percent higher than the same time last year. Cool temperatures and irregular rainfall have lowered yields in 2005 thus far. Moreover, dry conditions in late summer 2004 adversely affected flowering, particularly of the crop harvested in the early months of 2005. Favorable weather in April helped improve production over the previous month. With over 60 percent of Hawaii's

Table 7--U.S. imports of fresh papayas, by country, 1995-2004

Country	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
	1,000 pounds									
Mexico	67,156	110,661	88,233	87,438	123,307	121,527	151,879	147,632	164,494	207,703
Belize	1,438	5,347	7,971	9,397	8,485	12,269	12,868	24,297	34,662	53,390
Brazil	0	0	19	1,102	6,229	10,301	11,220	12,820	15,825	10,733
Dominican Republic	1,251	2,517	2,122	1,152	2,608	5,579	6,342	5,323	5,470	2,647
Jamaica	3,462	5,244	4,582	4,562	4,194	3,411	3,480	4,189	3,294	2,197
Other countries	82	2,326	3,338	1,967	1,738	986	371	907	852	1,166
World	73,388	126,095	106,264	105,620	146,561	154,073	186,160	195,166	224,598	277,836

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

papaya acreage already in the productive stage and larger than a year ago, continued favorable weather should help boost production levels in the months ahead. If this becomes a reality, grower prices could fall.

Meanwhile, market demand for fresh papayas in the United States has been met by increased imports so far during first-quarter 2005. Overall imports were up 5 percent from January-March 2004. Imports were up from Mexico and Belize but were down from Brazil due to planting disruptions caused by rains in July-September 2004 and by favorable coffee prices that influenced several Brazilian growers to shift to planting coffee instead. Weekly shipment data from the Agricultural Marketing Service (AMS) indicate that more recent shipments from Mexico are falling behind last year, driving down overall imports. However, the weakness in papaya f.o.b. shipping-point prices as a result of larger first-quarter supplies has not been reversed by current lower shipments. AMS-quoted f.o.b. shipping-point prices for Mexican Maradol variety papaya crossing through Texas as of early May ranged from \$9.00-\$10.00 per 35-40 pound carton, compared with \$11.00-\$13.00 per carton the same time last year. If imports from Mexico continue lower during its heavy shipping period from April-June, domestic supplies for this year could be limited, likely reversing the consistent upward trend in domestic consumption experienced over the last 6 years.

### ***Mango Supplies Plentiful***

First-quarter 2005 domestic mango supplies, based entirely on imports, surpassed the same time last year by 16 percent. January-March imports were up from nearly all foreign suppliers during that period, except from Guatemala and the Dominican Republic. The United States imports mangoes from many countries in Central and South America, but Mexico provides more than half of the imports. Last year, shipments from Mexico totaled 383.8 million pounds, 63 percent of total import volume (table 8). Rainy weather had affected production in Mexico's Chiapas growing area, one of the mango production regions that supply during the first half of the season. Cumulative imports from Mexico through February were down from the same time last year. Although Mexican shipments to the United States still lagged those from Peru by the end of the first quarter, supplies are picking up. January-March imports from Mexico were up 27 percent and from Peru were up 9 percent.

Table 8--U.S. imports of fresh mangoes, by country, 1995-2004

Country	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
1,000 pounds										
Mexico	252,870	306,842	348,045	356,240	360,105	366,856	344,744	361,485	381,953	383,760
Peru	8,447	9,896	7,378	8,007	25,090	27,111	34,288	45,227	45,375	66,710
Brazil	6,457	10,773	11,913	15,540	28,030	37,443	59,385	79,454	86,054	59,937
Ecuador	3,285	8,569	1,936	11,596	22,910	38,922	42,037	47,311	60,177	55,194
Guatemala	12,823	15,175	14,921	22,555	21,051	18,262	22,739	21,053	18,207	19,346
Haiti	21,937	18,132	22,721	15,748	20,159	22,397	12,957	18,456	13,368	17,779
Nicaragua	1,650	2,081	1,708	3,236	1,495	3,409	3,870	3,150	4,813	2,958
Costa Rica	41	802	1,263	891	2,393	3,223	4,384	2,940	3,046	2,555
Other countries	4,851	5,508	1,323	1,365	1,447	682	165	1,506	822	851
World	312,361	377,777	411,207	435,177	482,681	518,305	524,569	580,582	613,815	609,090

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

Shipments from Mexico in April to early-May are registering over a 10-percent increase from the same time last year, based on AMS weekly shipment data. This is boosting overall supplies in the United States, and even though supplies are up, recent prices are indicative of strong demand in the domestic market. F.o.b. shipping-point prices for Mexican Haden mangoes crossing Texas in early May were quoted at \$4.00-\$4.50 per 1-layer carton (8s), compared with \$2.75-\$4.00 per carton the same time last year. F.o.b. prices for Mexican Tommy Atkins mangoes were \$3.50-\$4.25 per carton (9s), compared with \$2.75-\$4.00 a year ago.

Industry sources feel optimistic that although some of Mexico's production regions, particularly those that supply the second half of the season, are having a late start this year which may potentially cause some supply gaps within the season, overall supplies are going to be plentiful to meet export demand, particularly in its most important market, the United States. If U.S. mango imports move ahead of a year ago in 2005, this could well be another record-breaking year for mango consumption in the United States, which in 2004 rose to 1.97 pounds per person.

While domestic mango consumption has consistently increased year-after-year over the last 12 years, it still continues to lag behind consumption of many other fresh fruit due to lack of consumer awareness about the fruit. Last year, mangoes ranked number 12 in U.S. fresh fruit consumption. With a growing appeal among U.S. consumers to try new food, especially food that add to a healthy diet, there is the potential to further boost the demand for mangoes in the United States. In an effort to do so, a National Mango Promotion Board was established under the Mango Promotion, Research, and Information Order and became effective November 3, 2004. Under the order, first handlers and importers of 500,000 or more pounds of mangoes will be assessed one-half cent per pound on domestic and imported mangoes. Although the members of the Board have yet to be named, collection of assessments already began on January 3, 2005. The Board will use these funds to conduct a generic program geared to maintain, develop, and expand the market for fresh mangoes in the United States.

### ***Pineapple Imports Lower***

Total U.S. imports of pineapple and pineapple products decreased 5 percent in 2004 from the previous year. Driving down overall imports were declines in pineapple juice and canned pineapple imports (tables 9 and 10). At 69.1 million single-strength gallons, juice imports last year dropped 18 percent, with the top four

leading foreign suppliers of pineapple juice to the United States—the Philippines, Thailand, Indonesia, and Costa Rica—all posting significant declines. The Philippines and Indonesia also provide large volumes of canned pineapple products to the United States, and last year, lower shipments from both these sources together with declines from other smaller suppliers such as Malaysia more than offset the higher volumes shipped from Thailand and China. As a result, overall canned pineapple imports fell 2 percent, to 727.1 million pounds. U.S. imports of fresh pineapples, on the other hand, posted an 8-percent growth last year, despite slightly lower shipments from its leading supplier, Costa Rica (table 11). Increases came from key suppliers such as Ecuador, Honduras, and Mexico and especially from Guatemala and Panama where shipments were up immensely.

Representing the bulk of domestic pineapple supplies, this decrease in imports meant that fewer supplies were available to fulfill domestic demand. Total pineapple consumption in the United States decreased 10 percent in 2004 from a year earlier, to an estimated 12.7 pounds per person, fresh-weight equivalent. Consumption declined for all pineapple use, including fresh use. Fresh pineapple consumption declined almost 1 percent, to 4.35 pounds per person. On a fresh-weight basis, 2004 domestic per capita use for pineapple juice and canned pineapple declined to 3.95 pounds (down 21 percent from the previous year and the lowest level since 1978) and to 4.44 pounds (down 6 percent).

Table 9--U.S. imports of pineapple juice, by country, 1995-2004

Country	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
1,000 single-strength gallons										
Philippines	43,718	36,806	37,673	33,963	33,459	34,971	39,319	38,754	48,821	40,808
Thailand	30,440	31,131	23,045	17,203	29,573	22,522	21,454	20,213	19,535	16,700
Indonesia	3,951	6,771	8,888	5,244	9,795	6,260	6,924	10,224	8,625	6,451
Costa Rica	1,780	1,704	2,916	1,598	3,073	2,124	1,953	3,716	2,885	1,654
Vietnam	0	0	0	0	0	0	0	76	275	958
Ecuador	22	79	22	12	1	0	0	0	835	841
Mexico	523	640	732	2,093	509	349	235	627	1,279	604
Honduras	48	970	472	114	78	66	57	241	193	268
Brazil	0	11	0	43	904	298	21	657	739	181
China	52	0	21	121	80	22	180	189	120	169
Other countries	4,483	5,732	2,314	1,110	751	870	554	695	605	467
World	85,019	83,846	76,082	61,502	78,224	67,482	70,698	75,391	83,912	69,101

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

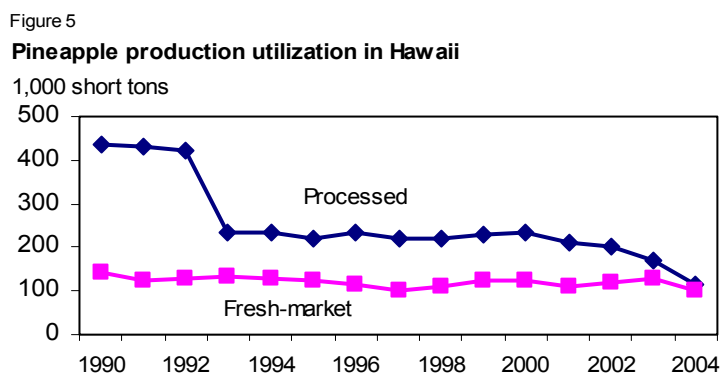
Table 10--U.S. imports of canned pineapples, by country, 1995-2004

Country	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
1,000 pounds										
Philippines	274,709	276,574	277,709	247,345	274,052	306,735	296,357	287,462	304,298	286,642
Thailand	219,508	172,067	167,347	109,955	257,272	183,580	168,261	183,595	224,135	242,382
Indonesia	61,580	120,862	145,840	108,676	144,861	146,360	122,026	135,323	117,412	113,174
China	1,051	3,907	5,011	22,354	29,904	17,098	17,888	31,459	54,173	58,335
Malaysia	18,340	18,044	20,915	15,084	15,077	9,556	10,000	11,322	17,877	16,463
Other countries	79,790	68,387	44,382	44,985	37,258	41,046	33,604	35,297	26,845	10,105
World	654,977	659,840	661,204	548,399	758,424	704,376	648,136	684,457	744,740	727,102

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

While lower imports (except fresh imports) contributed largely to the decline in 2004 U.S. pineapple consumption, a very small domestic crop in Hawaii also pushed supplies down, particularly for processed pineapples. Poor economic conditions continue to plague Hawaii's pineapple processing sector, and this is being reflected by declining acreage for the crop over the last 5 years. There were 3,000 fewer acres in production during 2004, for a total of 13,000 acres. As a result, Hawaii's pineapple production was much smaller at 215,000 short tons, down from 300,000 short tons in 2003. Processing production still holds a major portion of the State's overall crop, but production has been shifting to the high-value fresh market where there has been rapid demand growth over the last several years (fig. 5). This declining trend in processing production will likely continue in the next few years, putting more weight on imports in fulfilling market demand. Processing output in Hawaii declined 32 percent in 2004, to 116,000 short tons, and fresh-market production declined 24 percent, to 99,000 short tons. Even though the industry is putting more emphasis on the fresh market, conversion of plantings to a low acid variety, which would generally appeal more to fresh-market consumers, has temporarily reduced the fresh-market crop. As these new plantings come into production, fresh-market production will likely be on the rise.

January through March imports of fresh and canned pineapples are up 13 percent and 15 percent from the same time last year. Juice imports, on the other hand, continue to lag, with still fewer shipments coming in from the Philippines and Thailand.



Source: National Agricultural Statistics Service, U.S. Department of Agriculture.

Table 11--U.S. imports of fresh and frozen pineapples, by country, 1995-2004

Country	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
	1,000 pounds									
Costa Rica	172,995	192,305	344,342	446,029	504,018	574,663	581,531	765,120	888,956	879,420
Ecuador	3,241	8,939	9,281	5,268	11,785	14,341	18,788	40,405	65,713	76,817
Honduras	73,375	60,126	54,460	59,414	73,976	72,570	44,690	45,478	54,516	76,025
Mexico	13,599	17,849	35,423	41,009	33,530	38,505	54,180	39,799	33,421	60,102
Guatemala	1,202	877	333	1,018	3,846	1,681	5,581	1,617	6,471	38,840
Thailand	4,000	6,179	5,299	6,505	4,722	6,255	8,021	6,845	9,255	8,894
Panama	92	5,627	564	299	0	275	561	930	1,062	3,884
South Africa	117	78	0	0	0	9	76	157	329	398
China	0	2	0	0	258	442	41	251	256	335
Vietnam	0	0	0	0	344	497	741	1,468	662	241
Other countries	10,155	13,115	6,145	3,951	216	2,053	1,440	575	2,008	766
World	278,775	305,098	455,849	563,493	632,697	711,292	715,651	902,645	1,062,649	1,145,722

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

### ***Reduced Supplies Limit 2004/05 Exports Of Many Fresh Fruit***

U.S. exports of many fresh fruit during the 2004/05 season through March continue to lag last season. Exports of most citrus fruit remained lower due to reduced supplies (table 12). The lighter citrus supplies may be attributed to the sharply smaller crops in Florida caused by the hurricanes last year and the rainy weather in California this winter that had created sporadic supply gaps in the fresh market. Expectations of a larger California Valencia orange crop could drive down fresh orange prices and together help spur orange exports during the summer.

Fresh pear and strawberry exports were also down this season through March. Reduced production of pear varieties utilized mostly for fresh consumption has limited the quantity available for exports. Already near the end of its marketing season, U.S. fresh pear exports were lower to two major markets, Mexico and Canada, as well as many European Union and Asian markets. Accounting for nearly all of the volume exported, strawberry shipments to Canada fell 12 percent during the first 3 months of 2005 because of reduced exportable supplies. Although California's strawberry shipments are heaviest during the spring and early summer, first-quarter shipments were light due to the heavy rains that not only disrupted harvesting schedules but also caused damage to some of the fruit.

U.S. fresh apple exports are higher than last season thus far because of the bigger domestic crop. Apple exports posted increases of over 10 percent in Canada and Mexico, the leading markets. Exports were also strong to other major markets, except to Taiwan, Hong Kong, and Indonesia. Export prospects to Taiwan in the coming months appear more positive now that the country's ban on U.S. Pacific Northwest apples that began in December last year, due to phytosanitary reasons, have been suspended effective April 27, 2005. However, although U.S. exporters could ship apples to Taiwan year round, total exports to this market for the 2004/05 season will likely remain lower than last season because the United States' heavy shipping period to this market has already passed before the market was re-opened. Meanwhile, prospects for continued increased exports to Mexico this season could be dampened by the recent decision by the Mexican Government to revoke the agreement to suspend the high anti-dumping tariff on U.S. Northwest Red and Golden Delicious apples. While other varieties are not affected by the anti-dumping tariff, Mexican consumers have a strong preference for the Red and Golden Delicious varieties.

The outlook for 2004/05 tree nut exports continues strong. Despite a much smaller domestic crop, season-to-date almond exports are just fractionally lower than a year ago, mostly due to lighter shipments to Japan. Almond exports to most other large markets remained strong. Exports of walnuts, pecans, and pistachios are all higher, with pistachio exports posting the largest growth.



Table 12--U.S. exports of selected fruit and tree nut products

Commodity	Marketing season	Season-to-date (through March)		Year-to-date change
		2004	2005	
		--- 1,000 pounds ---		Percent
Fresh-market:				
Oranges	November-October	843,174	656,652	-22.1
Grapefruit	September-August	760,192	419,237	-44.9
Lemons	August-July	154,883	145,583	-6.0
Apples	August-July	758,169	916,857	20.9
Grapes	May-April	619,545	677,329	9.3
Pears	July-June	317,154	293,707	-7.4
Peaches (including nectarines)	January-December	3,302	4,640	40.5
Straw berries	January-December	41,015	35,265	-14.0
Sweet cherries	January-December	342	326	-4.6
		--- 1,000 sse gallons 1/ ---		
Processed:				
Orange juice, frozen concentrate	October-September	32,014	24,375	-23.9
Orange juice, not-from-concentrate	October-September	29,446	33,260	13.0
Grapefruit juice	October-September	16,146	12,609	-21.9
Apple juice and cider	August-July	3,676	3,576	-2.7
Wine	January-December	21,733	21,670	-0.3
		--- 1,000 pounds ---		
Raisins	August-July	181,472	183,703	1.2
Canned pears	August-July	6,247	19,051	204.9
Canned peaches	July-June	83,088	61,029	-26.5
Frozen straw berries	January-December	2,365	5,082	114.9
		--- 1,000 pounds ---		
Tree nuts:				
Almonds (shelled basis)	August-July	581,749	579,227	-0.4
Walnuts (shelled basis)	August-July	96,592	104,367	8.0
Pecans (shelled basis)	September-August	16,106	19,583	21.6
Pistachios (shelled basis)	September-August	18,186	39,050	114.7

1/ Single-strength equivalent.

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

### ***2004/05 Fresh Apple and Grape Imports Curtailed***

As domestic fresh apple inventories remain large, demand for imports this season has been lackluster. Apple shipments to the U.S. market through March are down by more than half the quantity shipped last season from leading suppliers such as Chile, New Zealand, Republic of South Africa, and Argentina (table 13). Shipments from Canada posted a more moderate decline (down 3 percent) than the other major suppliers, but its shipments represented nearly 70 percent of total import volume.

U.S. grape imports also posted declines for this season through March. Despite a smaller California crop in 2004, imports were lower mostly during the first half of the season. As the major source of grapes for the United States during the winter season, increased production in Chile pushed U.S. fresh grape imports up slightly during the first 3 months of 2005. Expected large production in Mexico will likely keep imports strong this spring because it is the United States' largest foreign supplier of fresh grapes during this period.

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

Commodity	Marketing season	Season-to-date (through March)		Year-to-date change
		2004	2005	
		--- 1,000 pounds ---		Percent
Fresh-market:				
Oranges	November-October	11,972	19,933	66.5
Tangerines (including clementines)	October-September	168,939	156,145	-7.6
Lemons	August-July	30,668	60,068	95.9
Limes	September-August	309,986	363,304	17.2
Apples	August-July	133,946	80,796	-39.7
Grapes	May-April	1,109,657	1,023,289	-7.8
Pears	July-June	80,832	102,755	27.1
Peaches (including nectarines)	January-December	136,207	140,019	2.8
Bananas	January-December	2,098,074	2,075,403	-1.1
Mangoes	January-December	97,233	112,309	15.5
		--- 1,000 sse gallons 1/ ---		
Processed:				
Orange juice, frozen concentrate	October-September	101,525	140,756	38.6
Apple juice and cider	August-July	274,456	247,209	-9.9
Wine	January-December	36,204	40,967	13.2
		--- 1,000 pounds ---		
Canned pears	August-July	29,411	28,658	-2.6
Canned peaches (including nectarines)	July-June	58,770	62,686	6.7
Canned pineapple	January-December	180,140	207,865	15.4
Frozen straw berries	January-December	42,737	51,792	21.2
		--- 1,000 pounds ---		
Tree nuts:				
Brazil nuts (shelled basis)	January-December	3,302	5,550	68.1
Cashew s (shelled basis)	January-December	63,075	74,483	18.1
Pine nuts (shelled basis)	January-December	3,452	3,429	-0.7
Pecans (shelled basis)	September-August	44,450	55,747	25.4

1/ Single-strength equivalent.

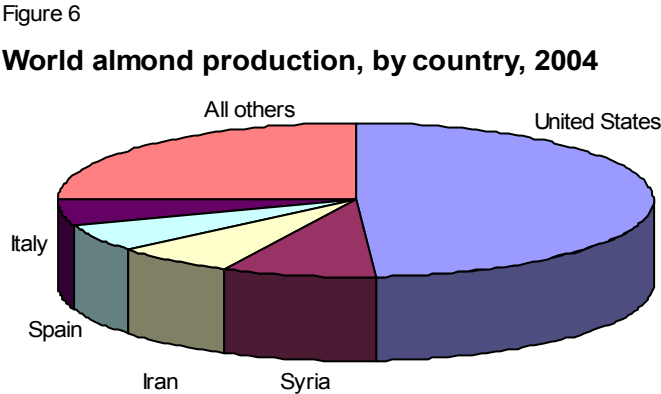
Source: Bureau of the Census, U.S. Department of Commerce.

# Commodity Highlight

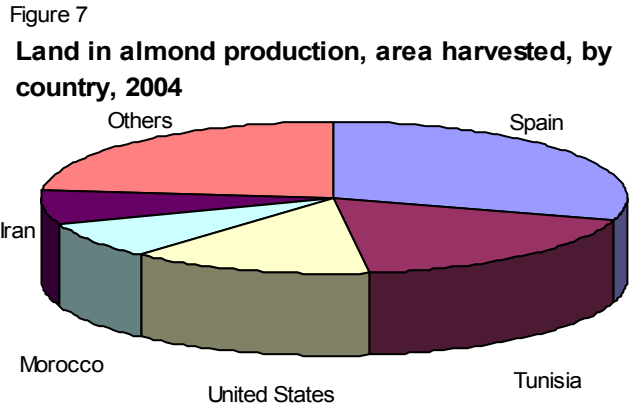
## U.S. Almond Industry: The Biggest in the World

The United States is the world's leading producer of almonds, with almost all the production concentrated in California's San Joaquin and Sacramento Valleys. California became the largest almond producer in the late seventies, out producing Spain for the first time in 1977. Following heavy plantings in the late seventies to early eighties, California's production continued to grow rapidly, increasing an average of 23 percent annually throughout the eighties as the trees planted during the seventies became commercially productive. While continuing to grow, although at a slower pace in the nineties and early 2000s, California's crop accounted for almost half the world's production in 2004 (fig. 6).

Although it is the leading producer, the United States has fewer acres in almond production than Spain and Tunisia (fig. 7). U.S. acreage has higher yields than either of these countries, likely due to higher tree density per acre among its recent plantings. U.S. yields, however, are not as high as some traditional almond producers, such as Syria and the United Arab Emirate.



Source: Food and Agriculture Organization, United Nations.



Source: Food and Agriculture Organization, United Nations.

### ***Almonds Are Member of the Stone Fruit Family***

The almond belongs to the same plant family as stone fruit: peach, plum, nectarine, apricot, and cherry. It is native to western Asia and is adapted to the warmer areas of Mediterranean countries and western United States. California accounts for over 99 percent of almond production in the United States. Production is concentrated in the San Joaquin Valley and around Sacramento. Kern, Merced, Stanislaus, and Fresno counties account for 62 percent of California's acreage planted to almonds.

The trees, like many fruit and nut trees are alternate bearing, meaning they produce a heavy crop one year followed by a lighter crop the following year as the nutrient levels of the trees are replenished. Almond trees are not self-pollinating. As a result, at least two different varieties are necessary in a productive orchard and dependent on bees for pollination. It takes 6 to 8 months from full bloom until nut maturity.

While there are numerous varieties of almonds, the most popular in California are the Nonpareil, Carmel, and Butte. In 2004, the Nonpareil accounted for 38 percent of the planted almond acreage; the Carmel variety accounted for 17 percent, and the Butte accounted for 11 percent. Commercial use of the varieties may vary as some are more suitable than others for different manufactured products such as blanching, paste, and flour.

### ***Structure of the Almond Industry Changing***

The 2002 Census of Agriculture shows the structure of the almond industry changing from 1997, when the last Census was conducted. In 2002, the Census reported that 6,482 farms grew almonds in the United States, of which 6,391 farms are located in California. In 1997, there were 6,911 farms with almond production, 6,879 in California. Because California dominates the industry, the emphasis of the analysis will reflect California's industry.

In 2002, 61 percent of the farms growing almonds had less than 50 acres in the crop, down from 68 percent in 1997. The number of farms with fewer than 50 acres declined over this period, while the number with 100 or more acres increased. The number of farms having 750 to under 1,000 acres grew the fastest during this period, indicating that while there are fewer farms growing almonds in 2002 than in 1997, those existing in 2002 are larger.

Most almond farms are individually or family owned. Only 8 percent of the farms were corporations and most of those were family held. Farming was the major occupation of the primary operator on the average almond farm. Less than a third of the operators depended on an occupation other than farming. Regardless of their primary occupation, the typical primary operator of an almond farm was over 45 years old. Over half the operators were 55 and over, with slightly over one-quarter at least 65 years old. The heavy concentration of older farmers in the almond industry is likely to have a strong affect on the industry's structure in the next 5 to 10 years.

### ***While the Number of Farms Have Decreased, the Number of Almond Handlers Grew***

Although there were 7 percent fewer farms growing almonds in 2002 than in 1997, the number of handlers has increased in the 2000s. In 2005, the Almond Board of California, (the administrative arm of the California Almond Marketing Order) listed 113 almond handlers, up from 97 handlers in 1997. The increase in the number of handlers is likely in response to the increase in production and the steady prices that almonds bring both in the domestic market and from abroad. Among the handlers, Blue Diamond Growers is one of the largest. Blue Diamond is a grower's cooperative that processes and markets almonds. In 2004, it reported that it had 4,000 almond grower members and received about a third of California's crop.

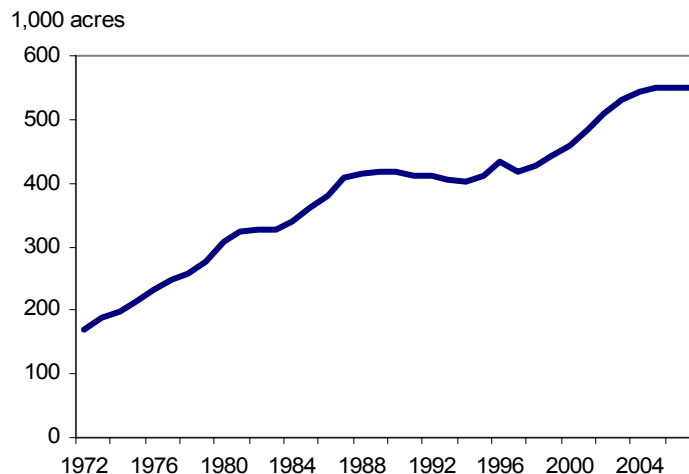
The handlers are responsible for processing and packaging almonds and marketing the final products. Almonds received by handlers must meet quality standards set by the federally administered California Almond Marketing Order that is also responsible for authorizing production research, marketing promotion, and development. Processing almonds, also referred to as manufactured almonds by the industry, include shelling, dry roasting, blanching, slicing, chopping, making them into flour or paste, and flavoring. The natural or processed almonds are then packaged for wholesale or retail. They are shipped shelled, in-shell, in bulk bags, wholesale packs, or retail containers.

### ***Almond Acreage Increased Steadily Since the Early 1920s***

The number of almond-bearing acreage has increased at an average annual rate of 3.5 percent since 1919, the first reported almond data by USDA. The number of bearing acres ranged from 35,810 in 1920 to 72,210 by 1929, with rapid increases during the first half of the decade. Another big jump in bearing acreage took place during the mid-1960s through the 1970s, when they increased from 117,250 in 1965 to 324,000 in 1979. The number of bearing acres has continued to increase, but at a slower rate since 1980. The number of almond-bearing acres has remained at 550,000 between 2003 and 2005 (fig. 8).

Figure 8

#### **U.S. almond bearing acreage, 1972-2005**



Source: National Agricultural Statistics Service, USDA.

Along with the increase in the number of acres producing the commercial almond crop were improvements in production and harvesting technologies that increased yields. Although yields alternate annually, increasing one year and declining the next as part of the alternate-bearing nature of the trees, overall yields increased an average of 12 percent annually between 1920 and 2003, going from 194 pounds of nuts per acre in 1920 to a record-high 2,000 pounds per acre in 2002.

***Almond Grower Prices Increase As Well As Production***

The increase in bearing acreage and yields brought increases in the size of the almond crop until it reached a record 1.09 million pounds in 2002. At the same time, the prices growers receive for their almonds have also been trending upward (fig. 9). Over the past 35 years, almond production grew at an average annual rate of 14 percent, while grower prices grew on average 11 percent annually. During the 1990s, production increased at a more rapid pace than prices. However, since 2000, prices have been increasing 20 percent annually, while production growth has slowed to an average of 6 percent a year. Increasing world demand for U.S. almonds has helped growers maintain strong prices even while they have increased the quantity available in the markets.

***Domestic and International Demand for U.S. Almonds Continues To Grow***

Demand for U.S. almonds has been growing steadily over the past 35 years in both the United States and in international markets, with growth especially robust since the late 1990s (fig. 10). The almond industry has been very successful at increasing worldwide demand for its products, helping to strengthen grower prices while increasing its production.

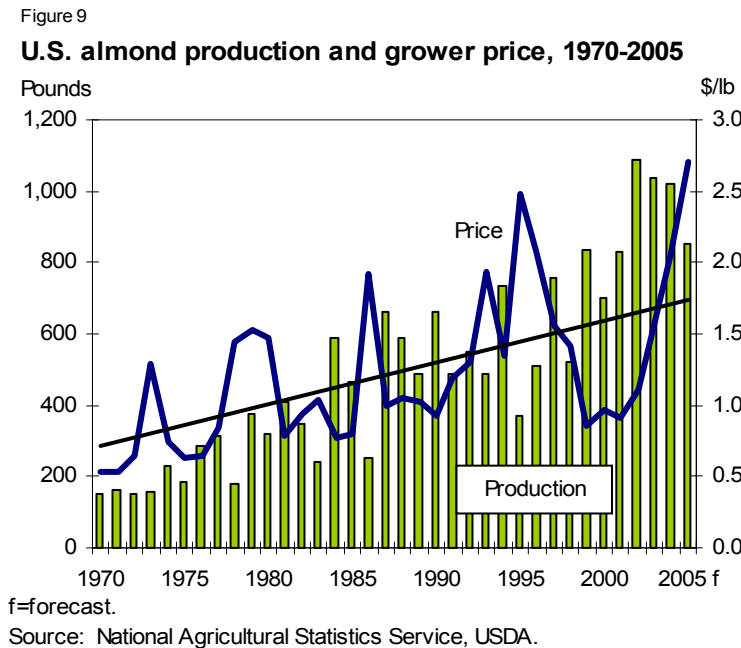
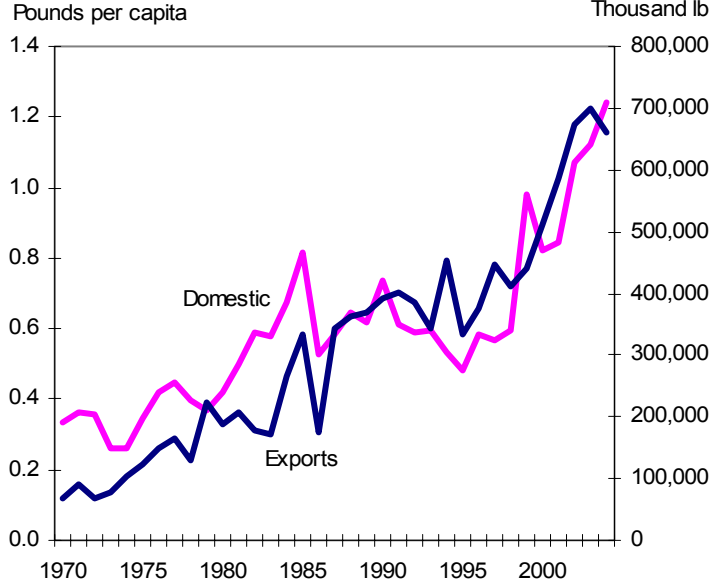


Figure 10

**U.S. and export demand for almonds, 1970-2004**



Sources: Bureau of the Census, U.S. Dept. of Commerce, and Economic Research Service, USDA.

Americans, on average, are not very big tree nuts consumers. In total, the average American consumed 2.86 pounds of tree nuts in 2003, including all domestic varieties as well as popular imported nuts, such as cashews and brazil nuts. In comparison, during the same year, the average American consumed 6.6 pounds of strawberries (fresh and frozen) and 2.5 pounds of avocados. While almond consumption trails behind that of many fruit, consumers have increased the quantity they consume, especially since 2000. Since 2000, almond per capita consumption has increased at a rate of 11 percent annually.

Of the 2.86 pounds of tree nuts consumed by the average American, almond consumption accounted for 36 percent of the total, more than any of the other domestically produced nuts (hazelnuts, macadamia nuts, pecans, pistachios, and walnuts), but about the same quantity as imported nuts.

Americans consume almonds in many ways. According to data from the Almond Board, more than half the almonds consumed are ingredients in manufactured goods such as candy, cereal, ice cream, granola bars, and cookies. Another quarter of the almonds are purchased at retail either to be used as a snack or for in-home baking and cooking. Another quarter is consumed at the food service level—at restaurants or from bakeries. Domestic demand for almonds is likely to continue to grow in the coming years. With growing evidence of the health benefits of nuts, such as almonds, consumers may increase their demand for almonds for snacking. Another growing use for almonds is as an ingredient in cooking. The growing Middle Eastern population in the United States, whose traditional dishes include almonds as an ingredient, along with the increased interest in international cuisines among the general population, is likely to increase consumer demand for almonds, especially from retail outlets.

With the growing demand for almonds by Americans, the share of the crop going for domestic consumption has increased over the past 10 years from about 20 percent of the crop in 1997/98 to 32 percent in 2004/05. At the same time, export demand has also been growing. The increase in export demand, however, has mostly been met by the increased production, as exports accounted for an average of 60 percent of the crop in 2004/05, relatively unchanged over the previous decade. The international markets during this time, however, have changed. In the mid-1990s, the major market was Germany, followed by Japan and Spain. In the past 2 years, Spain has become the major export market, followed by Germany and India. Other important markets include Italy, France, Canada, the Netherlands, Hong Kong, and Belgium.

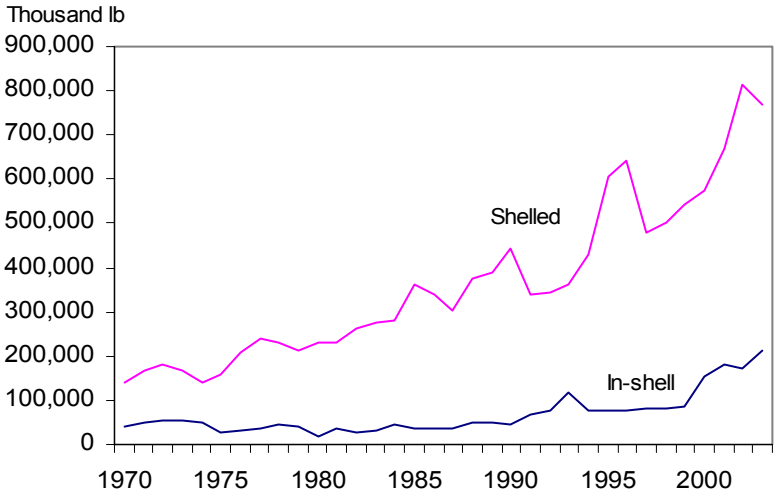
Most of the almonds shipped for export have been shelled; however, those going to India are in-shell. The growth of the Indian market has increased demand for in-shell almonds since 1999; previously demand was relatively flat (fig. 11). Shelled almonds are higher value than in-shell nuts, due to the value added by the handlers, creating another means of boosting grower prices, particularly for those growers who directly benefit from handlers' returns, such as with grower cooperatives.

**U.S. Dominates World Almond Market**

As the world's biggest producer of almonds, the United States is also the biggest exporter. The U.S. share of the world market has grown in recent years as the size of the domestic crop has increased. In 1994 and 1995, the U.S. crop accounted for half of the world's in-shell almond exports. In 2003, it accounted for three-fourths of all in-shell exports. Syria was the second biggest exporter, with its share of the export market at 4 percent. It was followed by Spain, China/Hong Kong, and Australia.

The major importers of in-shell almonds are usually lower income countries that use almonds in their cooking. India is the number one market for in-shell almonds. Not only are almonds used in Indian cooking, but the country also has an industry for

Figure 11  
**U.S. almond exports, 1970-2004**



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



shelling the imported almonds and then exporting the processed product. Pakistan, China, and Lebanon are also big markets for in-shell almonds.

The United States also accounts for about three-quarters of the shelled almond exports, maintaining relatively the same share of the world market since 1990. Spain is the second biggest exporter of shelled almonds, accounting for 15 percent of the world market.

At the same time that Spain is the second biggest exporter of shelled almonds, it is also the second biggest importer of shelled almonds, following Germany. Both countries have strong demand for almonds from their confectionary industries. In Germany, almond paste in the form of marzipan is very popular, and imported almonds are used to make the paste. In Spain, high-quality U.S. almonds are imported while Spanish almonds of lower value are exported.

### ***U.S. Industry Stabilizing for the Time Being***

The U.S. almond industry appears to be stabilizing for the time being. The number of bearing acres has remained constant between 2003 and 2005, and there are fewer nonbearing acres in the past few years than there have been in many years. Generally higher yields in recent years have allowed the industry to produce big crops with the quantity of acres presently planted.

The industry has historically gone through slow growth phases after rapid expansion, and it is presently in such a phase. With increasing domestic demand and strong export markets, almond grower prices are likely to continue to stay strong in the foreseeable future. Returns are likely to stay among the highest in the fruit and tree nut industry.

With 2005 forecast to be the third consecutive year of declining production, grower prices are likely to increase above the past few years. In turn, there may be an increase in acreage planted to almond trees as growers respond to the higher prices. In the future, however, competition from other produce industries, especially tree fruit, and from developers, will likely dampen the industry's ability to expand acreage. Competition from other countries is also likely to increase as producers in places like Australia and Chile see the prices growers receive in the United States and increase their almond tree plantings. The U.S. industry, however, has a very good reputation worldwide for its high quality almonds, and almonds will remain among the most profitable horticultural crops produced in the United States.

## Contacts and Links

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### Data

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

### Recent Article

#### *Understanding Fruit and Vegetable Choices*

<http://www.ers.usda.gov/publications/aib792/>

A series of research briefs providing information on the economic, social, and behavioral factors influencing consumers' fruit and vegetable choices. USDA's Food Guide Pyramid recommends 2-4 servings of fruit and 3-5 servings of vegetables daily, but current consumption levels of these healthy foods do not meet dietary recommendations.

### Related Websites

Fruit and Tree Nuts Briefing Room,

<http://www.ers.usda.gov/Briefing/FruitAndTreeNuts/>

Organic Farming and Marketing

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