

Historic, Archive Document

Do not assume content reflects current scientific knowledge, policies, or practices.

6409241
.087
Copy 2

Sto



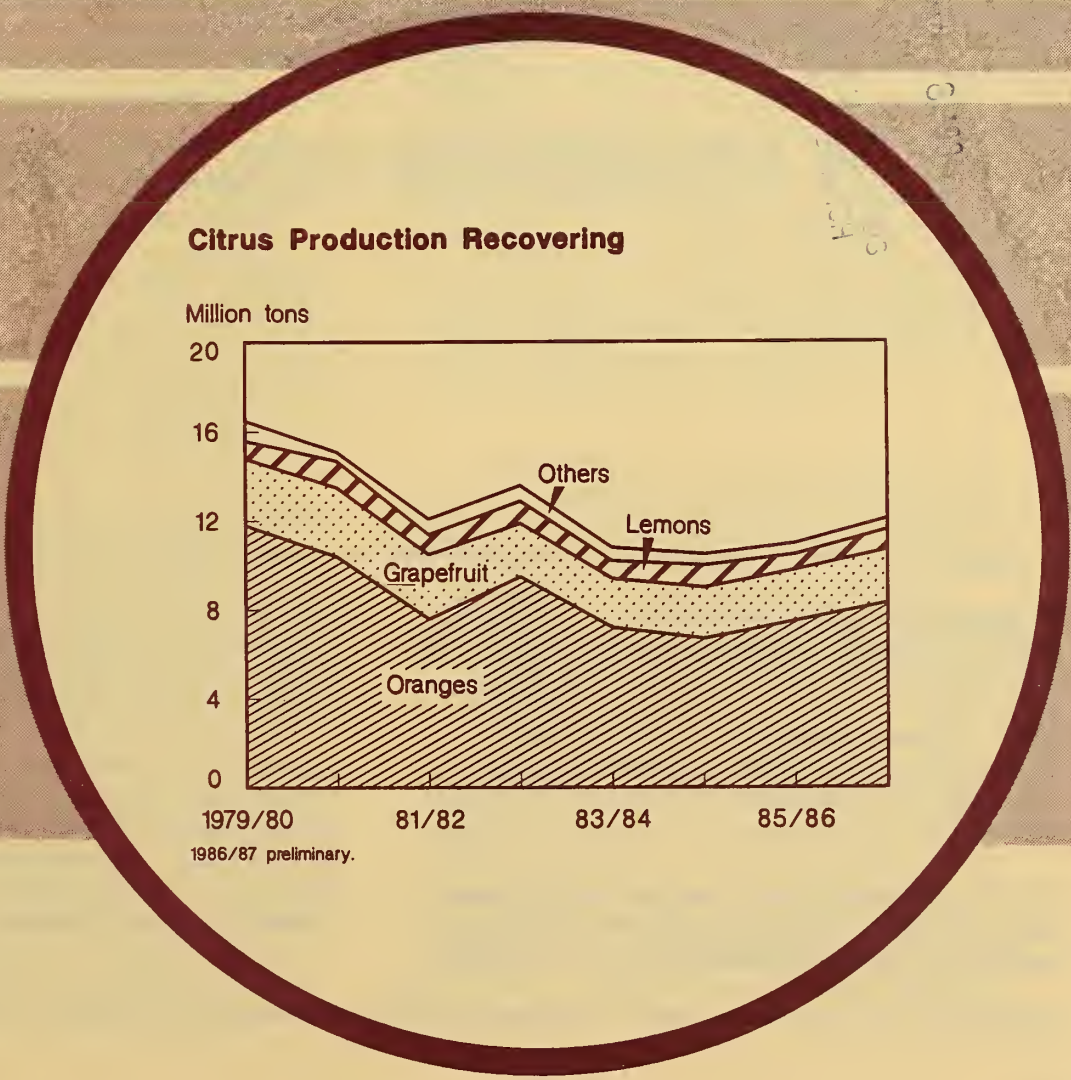
United States
Department of
Agriculture

Economic
Research
Service

TFS-241
March 1987

Fruit

Situation and Outlook Report



CONTENTS

Page	
4	General Price Outlook
5	Fresh Citrus
12	Other Citrus
12	Fresh Noncitrus
18	Processed Noncitrus Fruit
20	Berries
21	Tree Nuts
	Special Article:
24	The Outlook for U.S. Wine Imports
32	List of Tables

Principal Contributors

Ben W. Huang (202) 786-1767
Boyd M. Buxton (202) 786-1767

Statistical Assistant

Wynnice P. Napper (202) 786-1766

Electronic Word Processing

Cynthia M. Taylor

National Economics Division, Economic Research Service
U.S. Department of Agriculture, Washington, D.C. 20250

Approved by the World Agricultural Outlook Board. Summary released March 3, 1987. The next summary of the *Fruit Situation and Outlook* is scheduled for release on July 29, 1987. Summaries and full Situation and Outlook reports, including tables, may be accessed electronically. For details, call (301) 982-6662.

The *Fruit Situation and Outlook* is published three times a year and supplemented by a yearbook. Annual subscriptions are available

from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402. For ordering and pricing information, call the GPO order desk at (202) 783-3238.

Current subscribers will receive renewal notices from the Government Printing Office approximately 90 days before their subscriptions expire. Notices will be sent ONLY ONCE and should be returned promptly to ensure uninterrupted service.

SUMMARY

After decreasing for the last 2 months, grower prices for fresh and processing fruit advanced in February. The February grower price index rose 5.6 percent from January and 13.4 percent above a year ago mainly because of increased prices for oranges, grapefruit, apples, and pears. Continuing strong demand coupled with seasonal declines in supplies mean that grower prices will likely remain higher this spring than a year earlier.

Retail fresh fruit prices, reversing a downward trend of the last 3 months, rose 9.4 percent from December and 10.9 percent from a year earlier. Higher prices were posted for all fresh fruit, and prices are expected to stay higher this spring in view of strong demand and seasonally reduced supplies. In contrast, retail prices of processed fruit are slightly lower than last year, primarily reflecting lower prices of frozen concentrated orange juice (FCOJ). However, the recent f.o.b. price hikes for FCOJ and strong demand for canned and dried fruit are expected to strengthen the retail price of processed fruit.

The February 1 forecast of the 1986/87 citrus crop is 12.2 million tons (excluding grapefruit in California's "other areas" and limes in Florida), which is 1 percent below the January 1 estimate but 12 percent higher than last season. Larger crops are indicated for all citrus. The U.S. orange crop is forecast at 197 million boxes, 12 percent above 1985/86. Florida's all orange crop, recovering from the recent freezes, is estimated at 129 million boxes, 8 percent more than last season's crop. Texas' orange crop is projected at 850,000 boxes, compared with 310,000 in 1985/86. In 1984/85, no commercial supplies were harvested in Texas because of the December 1983 freeze. In California, prospects are for a crop of 64.5 million boxes, 18 percent higher than the previous season, while the Arizona crop is expected to be only 2 percent larger. Because of strong processor demand, f.o.b. prices for Florida fresh oranges have averaged slightly above a year ago even with a larger crop. Strong demand has also kept California-Arizona fresh navel orange prices firm. Prices are expected to remain firm in view of strong demand even though supplies will remain ample.

FCOJ production in Florida got off to a fast start this season. A sharp increase in the 1986/87 FCOJ pack is expected, possibly 152 million gallons, because of a larger crop and higher juice yield than last season. This compares with 132 million gallons in 1985/86. For 1986/87, the February 1 yield projection is 1.46 gallons per box at 42.0 degree Brix, compared with 1.38 in 1985/86. Florida's FCOJ imports, mostly from Brazil, have shown sharp gains to date. Thus, even with carryin stocks well below the previous season, the total FCOJ supply is expected to be significantly above year-earlier levels.

Despite the price hikes, movement of FCOJ thus far is running moderately ahead of last season's pace. Following the U.S. Department of Commerce preliminary ruling that Brazilian FCOJ had been exported to the United States at less than fair value, Brazilian processors have raised FCOJ prices two times to \$1,200 a metric ton, and reportedly have raised prices again to \$1,250. As a result, Florida processors have raised prices twice to the current level of \$4.34 a dozen 6-ounce cans (unadvertised brand, f.o.b. Florida canneries). This compares with \$3.84 a year ago. The final determination of possible injury by Brazilian FCOJ exports to the United States is scheduled to be made by April 22, 1987, a decision that probably will affect the future price movement of FCOJ.

The February 1 grapefruit production forecast, excluding California's "other areas" grapefruit, is 57.5 million boxes, 9 percent above last season. Because of strong demand, f.o.b. prices for fresh grapefruit have averaged well above year-earlier levels and are expected to stay strong during the balance of the season.

The February 1 projection for Arizona and California *lemon production*, at 24 million boxes, is 31 percent above last season's utilized production. Larger supplies have weakened lemon prices to well below last year's. With remaining supplies moderately larger than a year ago, lemon prices are expected to remain lower through the late spring.

Stocks of fresh apples in cold storage at the beginning of February were moderately larger than a year earlier. However, strong demand has kept apple prices firm. F.o.b. prices for fresh apples have been well above a year ago at several shipping points. In view of strong demand and seasonally reduced supplies, apple prices are projected to stay firm.

During the remainder of 1986/87, supplies of most processed noncitrus fruit will be smaller than a year ago. Movement of canned fruit has improved, and remaining supplies for some canned fruit items are tight. Consequently, prices have strengthened. Supplies of dried fruit during the balance of the season are less than a year ago. Demand for dried fruit is strong, and prices have been firm. Stocks of frozen noncitrus fruit and berries in cold storage are mixed. Stocks of

frozen strawberries are smaller than a year earlier, while those of blackberries and raspberries are significantly larger. Stocks of frozen tart cherries are near last year's levels. Prices are not likely to rise appreciably.

The 1986 U.S. tree nut production was 27 percent less than in 1985. Smaller crops were reported for almonds, filberts, pecans, and walnuts, while macadamia nut and pistachio crops were larger. Smaller crops of almonds, pecans, and filberts have strengthened grower prices, but lower grower prices are tentatively estimated for pistachios. Reflecting strong demand, grower prices for macadamia nuts are estimated substantially higher than last season. The value of 1986 utilized production of these edible nut crops (excluding walnuts) is estimated at \$855 million, up 54 percent from 1985.

GENERAL PRICE OUTLOOK

After declining the last 2 months, grower prices for fresh and processing fruit advanced in February. The February index of grower fruit prices rose to 169 (1977=100), 5.6 percent above January and 13.4 percent above a year ago, mainly because of higher prices for apples, grapefruit, oranges, and pears. Prices are expected to advance further this spring because of seasonally reduced supplies and strong demand. The average grower price is likely to remain moderately higher than last year.

Table 1.—Index of annual and quarterly prices received by growers for fresh and processing fruit, 1984-87

Year	Annual	1st	2nd	3rd	4th
1977=100					
1984	200	142	170	254	235
1985	183	180	178	192	183
1986	168	152	163	176	182
1987		1/ 165			

1/ Two-month average.

SOURCE: Agricultural Prices, NASS, USDA.

Reversing a downward trend of the last 3 months, the January BLS Consumer Price Index for fresh fruit advanced to 355.8, 9.4 percent above December and 10.9 percent higher than a year earlier. Higher prices were posted for all fresh fruit and are expected to stay higher this spring because of strong demand and seasonally reduced supplies.

With price increases for all processed fruit, the January BLS Consumer Price Index for processed fruit advanced to 165.7, up slightly from December but still 0.7 percent below a year ago. Lower prices were attributed to lower FCOJ prices. However, strong demand and reduced supplies have

Table 2.—Annual and quarterly Consumer Price Indexes for fresh fruit, 1984-87

Year	Annual	1st	2nd	3rd	4th
1967=100					
1984	329	295	321	355	343
1985	362	356	377	372	344
1986	369	352	375	386	364
1987		1/ 389			

1/ January's figure only.

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

resulted in higher prices for canned and dried fruit. With the two recent price hikes by Florida citrus processors, retail FCOJ prices are expected to rise in the months ahead. Strong canned and dried fruit prices combined with increased FCOJ prices are expected to further strengthen the Consumer Price Index for processed fruit. Retail prices of processed fruit fluctuated within a narrow range in 1986, decreasing 3 percent from 1985.

FRESH CITRUS

The February 1 forecast of the 1986/87 citrus crop is 12.2 million tons (excluding California's "other areas" grapefruit crop and Florida's lime crop), 1 percent below the January 1 estimate but 12 percent higher than last season's. Larger crops are indicated for all citrus. Demand for fresh citrus is strong, and grower prices are generally firm.

Oranges

Substantially Larger Production

The 1986/87 U.S. orange crop is forecast at 197 million boxes (7.57 million metric tons), fractionally lower than the January 1 forecast but 12 percent higher than in 1985/86. Larger output is estimated for all producing areas. Production of early, midseason, and navel varieties accounted for 56 percent of the crop, up substantially from a year ago. The Valencia crop is estimated to be 11 percent larger than last season.

Florida's all orange crop is estimated at 129 million boxes, 8 percent more than last season's crop. The early and midseason harvest—at 72 million boxes—is 12 percent above 1985/86. The Valencia crop is forecast at 57 million boxes, 4 percent more than the 1985/86 season.

In California, prospects are for a crop of 64.5 million boxes, 2 percent below the January 1 forecast but 18 percent higher than last season. The navel orange output forecast, at 36.5 million boxes, is 10 percent more than the 1985/86 harvest. The Valencia crop, forecast at 28 million boxes, is 30 percent above last season.

The Arizona orange forecast is 2.35 million boxes, 2 percent higher than 1985/86. Texas continues its recovery from the disastrous freeze of December 1983 with an orange crop of 850,000 boxes, compared with 310,000 in 1985/86. In 1984/85, no commercial supplies were harvested in Texas.

As of February 1, the U.S. orange crop harvest was 33 percent complete, compared with 34 percent a year ago. Harvest of Florida early and midseason varieties was 69 percent complete, while 36 percent of California's navel crop had been harvested.

Prices Firm

Because of strong processor demand, f.o.b. prices for Florida fresh oranges have averaged slightly above a year ago even with a larger crop. However, shipments of Florida oranges for fresh market have been running slightly behind last season's pace. This is attributable to the sharp increase in supplies of navel oranges from California. Through February 8, f.o.b. prices for Florida fresh early and midseason oranges have averaged \$5.44 a carton, compared with \$5.34 a year earlier.

Because of smaller FCOJ carryin stocks, shipments of Florida oranges to processors rose almost 8 percent over a year ago through early February. Consequently, Florida's delivered-in prices for early and midseason oranges for FCOJ have been strong. With strong demand for FCOJ, the need for processing oranges should remain strong. Florida orange prices are expected to stay firm.

Strong demand has also kept California-Arizona fresh navel orange prices firm. Increased shipments were recorded for all three outlets (domestic fresh, processing, and exports) through February 12. Total shipments were 8 percent above a year earlier.

Foreign demand for U.S. fresh oranges is very strong. Exports increased 22 percent over a year ago during the first 2 months (November and December) of 1986/87. Recorded shipments to Canada, our leading customer, grew 23 percent, while purchases from the EC were more than eight times as

Table 3.—Citrus fruit: Production, 1984/85, 1985/86, and Indicated 1986/87 1/

Crop and State	Boxes			Ton equivalent		
	Used		Indicated 1986/87	Used		Indicated 1986/87
	1984/85	1985/86		1984/85	1985/86	
	1,000 boxes 2/			1,000 short tons		
Oranges:						
Early, midseason, and navel varieties 3/:						
California	26,200	33,300	36,500	982	1,249	1,369
Florida	55,000	64,200	72,000	2,475	2,889	3,240
Texas	(4)	200	500	(4)	9	21
Arizona	650	600	850	25	23	32
Total	81,850	98,300	109,850	3,482	4,170	4,662
Valencias:						
California	26,200	21,500	28,000	983	807	1,050
Florida	48,900	54,800	57,000	2,201	2,466	2,565
Texas	(4)	110	350	(4)	5	15
Arizona	1,800	1,700	1,500	68	64	56
Total	76,900	78,110	86,850	3,252	3,342	3,686
All oranges:						
California	52,400	54,800	64,500	1,965	2,056	2,419
Florida	103,900	119,000	129,000	4,676	5,355	5,805
Texas	(4)	310	850	(4)	14	36
Arizona	2,450	2,300	2,350	93	87	88
Total oranges	158,750	176,410	196,700	6,734	7,512	8,348
Grapefruit:						
Florida all	44,000	46,750	50,000	1,870	1,987	2,126
Seedless	41,100	43,600	46,500	1,747	1,853	1,977
Colored	16,300	18,000	19,500	693	765	829
White	24,800	25,600	27,000	1,054	1,088	1,148
Other	2,900	3,150	3,500	123	134	149
Texas	(4)	220	2,100	(4)	9	84
Arizona	3,000	2,400	1,800	96	77	58
California 5/	8,800	8,400	—	289	276	—
Desert Valleys	3,800	3,600	3,600	121	115	115
Other areas	5,000	4,800	(5)	168	161	(5)
Total grapefruit	55,800	57,770	—	2,255	2,349	—
Lemons:						
California	19,800	15,100	18,500	752	574	703
Arizona	6,000	3,250	5,500	228	123	209
Total lemons	25,800	18,350	24,000	980	697	912
Tangelos:						
Florida	3,600	2,950	4,000	162	133	180
Tangerines:						
Florida	1,050	1,150	1,400	50	55	67
Arizona	700	700	700	26	26	26
California	1,680	1,800	1,900	63	68	71
Total tangerines	3,430	3,650	4,000	139	149	164
Temples:						
Florida	3,250	2,950	3,600	146	133	162
Total citrus	6/ 250,630	262,080	7/ 289,800	6/10,416	10,973	7/ 12,149

1/ The crop year begins with bloom of the first year shown and ends with completion of harvest the following year. 2/ Net content of box varies. Approximated averages are as follows: Oranges—California and Arizona, 75 lbs.; Florida, 90 lbs.; Texas 85 lbs.; Grapefruit—California, Desert Valleys, and Arizona, 64 lbs.; other California areas, 67 lbs.; Florida, 85 lbs.; Texas, 80 lbs.; Lemons, 76 lbs.; Tangelos, 90 lbs.; Tangerines—California and Arizona, 75 lbs.; Florida, 95 lbs.; and Temples, 90 lbs. 3/ Navel and miscellaneous varieties in California and Arizona. Early and midseason varieties in Florida and Texas, including small quantities of tangerines in Texas. 4/ Due to the severe freeze of December 1983, the 1984/85 Texas citrus crops were very limited, and forecasts were not issued. 5/ The first forecast for California grapefruit "other areas" will be as of April 1, 1987. 6/ Excludes Texas. 7/ Excludes California grapefruit in "other areas."

SOURCE: Crop Production, NASS, USDA.

large as a year ago. Exports to the East Asian and Pacific region increased 14 percent, with Hong Kong and Japan up 11 and 72 percent, respectively. Increased exports can be attributed primarily to abundant supplies of California export-grade oranges and the weaker dollar. Increases in the annual import quota, expansion of importers' profit margin due to the dollar's depreciation against the yen, and the smaller Japanese mandarin orange crop also helped U.S. orange exports to Japan. U.S. orange shipments to the EC could benefit from lower duty rates for U.S. citrus negotiated under the U.S.-EC citrus accord. In view of the larger California Valencia crop

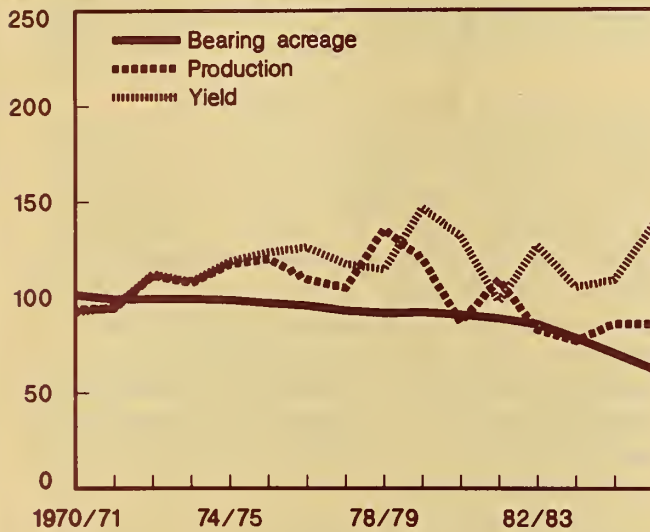
and the weak dollar, exports of fresh oranges late in the season are likely to remain strong.

In response to strong demand, f.o.b. prices for fresh California-Arizona navel oranges have been fairly close to year-earlier levels, even with a sharply larger crop. Through mid-February, f.o.b. prices have averaged \$7.47 a carton, compared with \$7.58 a year ago. Retail prices for fresh oranges have been near year-earlier levels. The BLS December 1986 retail prices averaged 49.8 cents a pound, almost the same as a year ago. If demand remains strong, fresh orange prices are likely to stay firm.

Oranges: Acreage, Yield, and Production

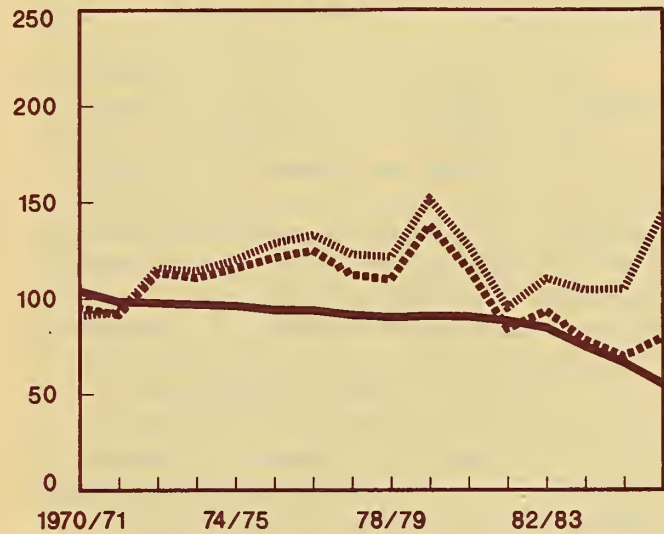
United States

% of 1970/71-1972/73 average



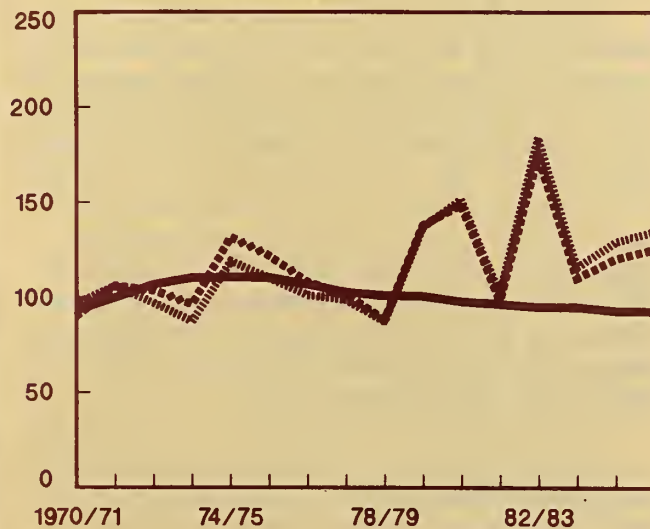
Florida

% of 1970/71-1972/73 average



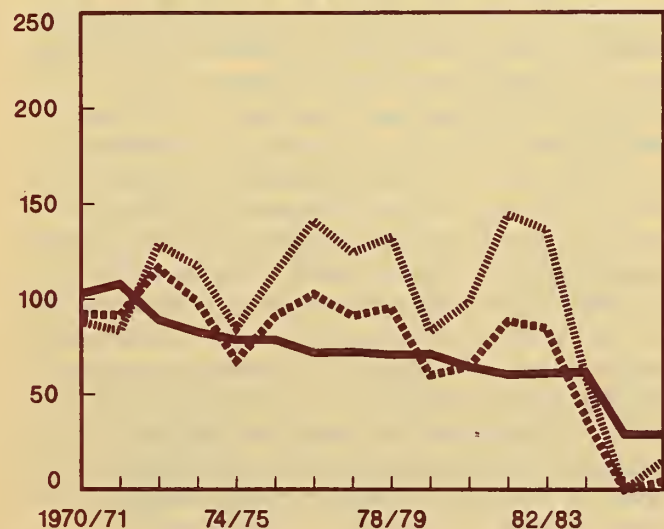
California and Arizona

% of 1970/71-1972/73 average



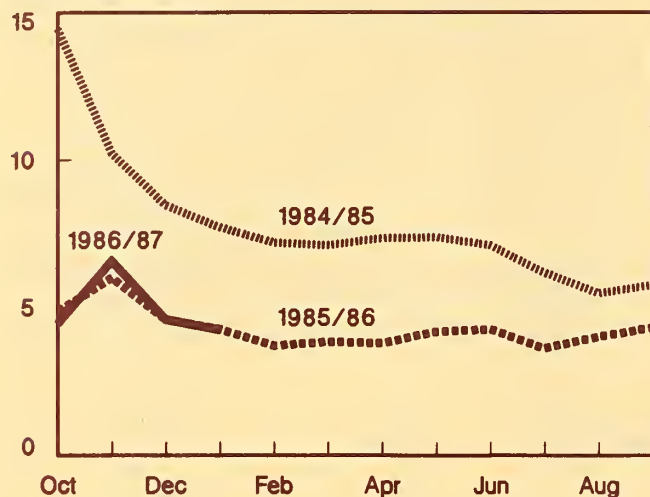
Texas

% of 1970/71-1972/73 average



All Oranges: U.S. Equivalent On-Tree Returns Received by Growers

Dollars per box



Sharply Larger FCOJ Pack Expected

FCOJ production got off to a fast start this season. Florida packers had processed 70.4 million gallons through mid-February, up 12 percent from a year earlier. The 1986/87 FCOJ pack is expected to be sharply larger, possibly 152 million gallons compared with 132 million last season, because of a larger crop and higher juice yield. The February 1 yield projection of FCOJ for 1986/87 is 1.46 gallons per box at 42.0 degree Brix, compared with 1.38 in 1985/86. Florida's FCOJ imports, mostly from Brazil, have shown sharp gains thus far. Consequently, even with sharply reduced carryin stocks, the total FCOJ supply is expected to be well above the previous season.

Despite increasing prices, total product movement this season is running moderately ahead of last year's pace. However, following the U.S. Department of Commerce preliminary ruling that Brazilian FCOJ had been exported to the United States at less than fair value, Brazilian processors have raised their prices two times to \$1,200 a metric ton, and reportedly have raised prices again to \$1,250. As a result, Florida processors have also raised prices twice to the current level of \$4.34 per dozen 6-ounce cans (unadvertised brand, f.o.b. Florida canneries). This compares with \$3.84 a year ago. The final determination of possible injury by Brazilian FCOJ exports is scheduled to be made by April 22. Because of the larger packs, Florida processors' FCOJ stocks

Table 4.—Oranges used for frozen concentrate, Florida, 1983/84–1986/87

Season	Orange and Temple production	Used for frozen concentrates 1/		Yield per box
	Million boxes	Percent	Gallons 2/	
1983/84	119.6	94.5	79.0	1.29
1984/85	107.2	86.1	80.3	1.38
1985/86	122.0	96.1	78.8	1.38
1986/87 3/	132.6	N.A.	N.A.	1.46

1/ Includes tangelos, Temples, tangerines, and K-early citrus. 2/ Gallons per box at 42.0 degrees Brix equivalent. 3/ Preliminary. N.A. = Not available.

SOURCES: Crop Production and Citrus Fruits, NASS, USDA.

available as of February 14 were moderately above a year ago.

Retail FCOJ prices during 1986 fluctuated from a low of \$1.45 per 16-ounce can in October to a high of \$1.76 in January. The average FCOJ price of \$1.54 was down 12 percent from 1985. The January 1987 price rose 3 percent from the previous month but is still 14 percent below a year earlier. With the increase in f.o.b. prices, retail prices are likely to rise further. However, the International Trade Commission's decision on possible injury by Brazilian FCOJ exports to the United States could affect future price movement for FCOJ.

Continued Strong Movement of Chilled Orange Juice

In response to continued growth in demand, Florida citrus packers continue to process a larger quantity of chilled orange juice. Through February 14, Florida's pack of chilled orange juice from fruit, single-strength reprocessed, and reconstituted FCOJ, totaled 137 million gallons, up 18 percent from year-earlier levels. With a larger crop and higher juice yield, the total 1986/87 pack of chilled orange juice in Florida is likely to be substantially above last season. In addition, a large quantity of chilled orange juice is reconstituted outside of Florida.

Lower prices have strengthened demand for chilled orange juice. Total product movement from Florida through February 9

was up 16 percent from a year ago. Export shipments rose sharply. Regional packers continue delivery to major markets of chilled orange juice pack from FCOJ at about \$7 per dozen 32-ounce carton. With the price hikes for imported Brazilian FCOJ, chilled orange juice prices are likely to increase somewhat.

Movement of Canned Orange Juice Strong

Because of sharply larger carryin stocks, Florida packers processed a moderately smaller quantity of canned orange juice through February 14 compared to a year ago. Despite higher prices, movement has been strong, up 13 percent. The current f.o.b. price is quoted at \$11 a case (12/46 ounces, sweetened and unsweetened), compared with \$10 a year earlier. Larger movement and reduced pack more than offset substantially larger carryin stocks, resulting in much lower stocks than a year ago. Consequently, f.o.b. prices may remain firm.

Grapefruit

Production Continues To Increase

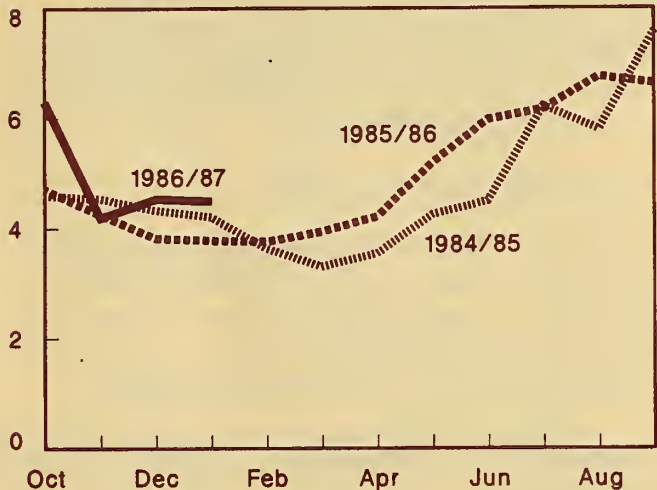
The February 1 grapefruit forecast, excluding California's "other areas" grapefruit, is 57.5 million boxes (2.16 million metric tons), fractionally lower than the January 1 forecast but 9 percent above last season. The Florida grapefruit projection remains at 50 million boxes, unchanged from the January 1 forecast but up 7 percent from last season. The California "Desert Valley" crop forecast continues at 3.6 million boxes, the same as last season. Arizona growers expect to harvest 1.8 million boxes, 25 percent above the previous season. Texas continues its recovery with a crop of 2.1 million boxes, compared with 220,000 last season.

Prices Strong

F.o.b. prices for Florida fresh grapefruit have been strong because of strong processor and export demand. With the slow-growing economy and higher prices, domestic demand for fresh grapefruit has been sluggish. F.o.b. prices to date for Florida fresh grapefruit have averaged well above year-earlier levels, but have declined from their early-season

All Grapefruit: U.S. Equivalent On-Tree Returns Received by Growers

Dollars per pound



high. In late February, the f.o.b. price for pink seedless grapefruit in Indian River was quoted at \$6.29 per box, compared with \$5.78 a year ago. In light of strong demand, prices are expected to stay strong throughout the season.

Export markets for Florida fresh grapefruit have been strong. During the first 4 months of 1986/87 (September-December), increased purchases were reported by almost all areas. Japan, our leading customer, has increased its purchases 18 percent from a year earlier. Nevertheless, the share of total exports to Japan declined to 37 percent, compared with 39 percent a year ago. Purchases from the European Community (EC) increased 26 percent, with France, the leading EC customer, taking 15 percent more. The weaker dollar and increased promotion under USDA's Targeted Export Assistance (TEA) program have contributed to increased exports. In addition, the Japanese agreement to accept Florida grapefruit from designated areas without ethylene dibromide (EDB) fumigation or cold treatment will encourage export sales. Recorded exports to Canada also strengthened somewhat. TEA funds for Florida citrus, at a total of \$4.6 million for fiscal 1986, are directed heavily toward promoting fresh grapefruit and will thus further strengthen export markets.

In response to strong demand for processed grapefruit products, Florida canners have been actively bidding for grapefruit since the beginning of the season. Consequently, delivered-in prices of grapefruit for

processing juice have averaged much higher than a year ago. In mid-February, f.o.b. prices of grapefruit processed for frozen concentrated grapefruit juice (FCGJ) were quoted at \$5.92 per box, compared with \$4.80 a year earlier. Prices are likely to remain strong with strong demand.

Larger Grapefruit Juice Pack

The net pack of Florida FCGJ through mid-February was running well above last year's pace. Despite higher prices, movement has been running near last season. The current f.o.b. price at \$4.18 a dozen 6-ounce cans

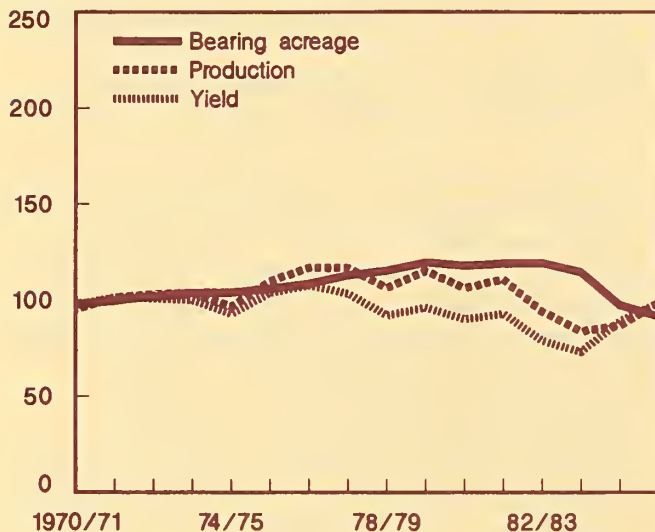
(Florida canneries) is 8 percent above a year earlier. The larger carryin stocks and pack have resulted in stocks, as of February 14, well above a year ago. In view of relatively strong movement and higher fruit costs, prices are likely to remain firm.

The total pack of chilled grapefruit juice (excluding single-strength reprocessed) through mid-February was significantly above the previous year. Movement has been strong, up 18 percent. However, the larger carryin stocks and pack more than offset increased movement, resulting in substantially increased stocks as of February 14.

Grapefruit: Acreage, Yield, and Production

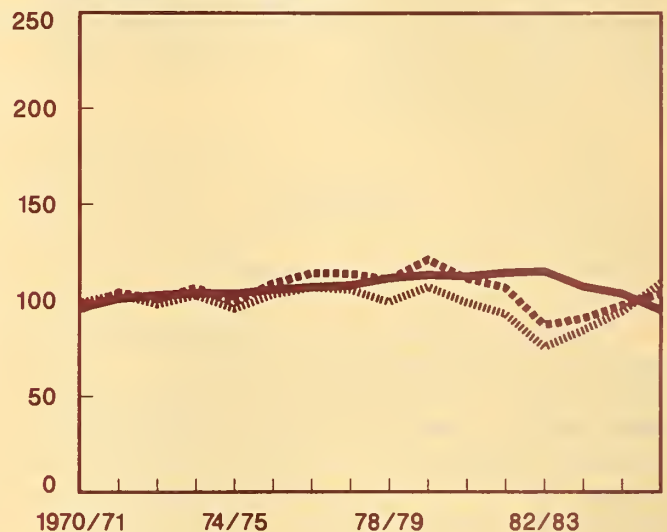
United States

% of 1970/71-1972/73 average



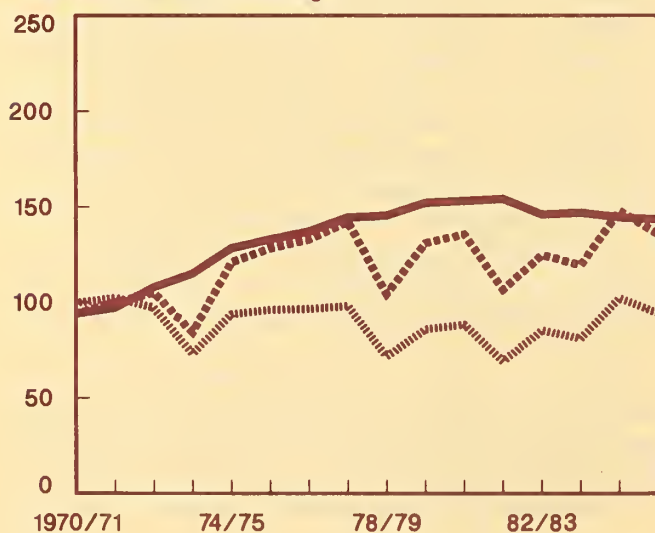
Florida

% of 1970/71-1972/73 average



California and Arizona

% of 1970/71-1972/73 average



Texas

% of 1970/71-1972/73 average

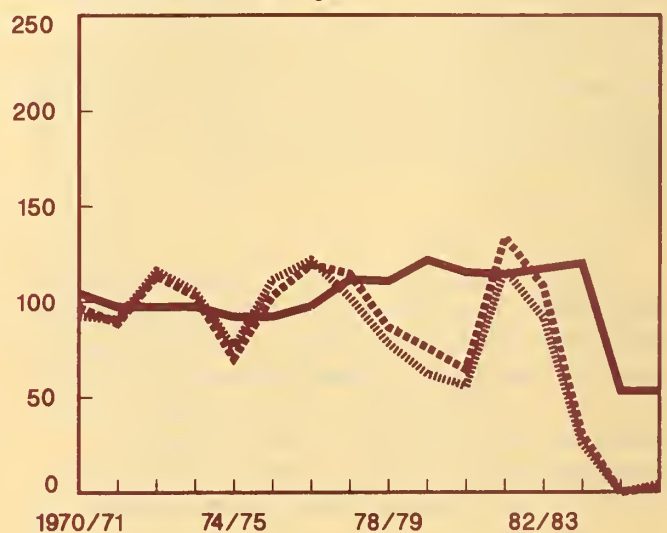


Table 5.—Grapefruit used for frozen concentrate, Florida, 1983/84–1986/87

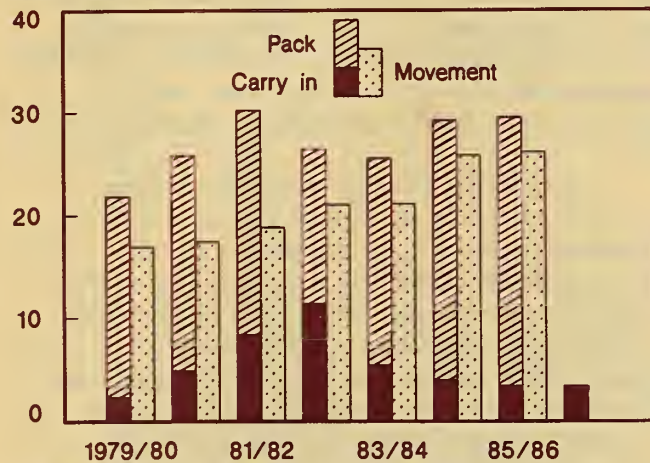
Crop year	Grapefruit	Used for		Yield per box
		frozen concentrate	Percent	
	Million boxes	Percent	Gallons 1/	
1983/84	40.9	18.7	45.7	.96
1984/85	44.0	23.0	52.3	1.08
1985/86	46.8	21.6	46.2	1.20
1986/87 2/	50.0	N.A.	N.A.	

1/ Gallons per box at 40.0 degree Brix equivalent. 2/ Preliminary. N.A. = Not available.

SOURCES: Citrus Fruit Annual, NASS, USDA and Florida Citrus Processors Association.

Florida Supply and Movement of Frozen Concentrated Grapefruit Juice

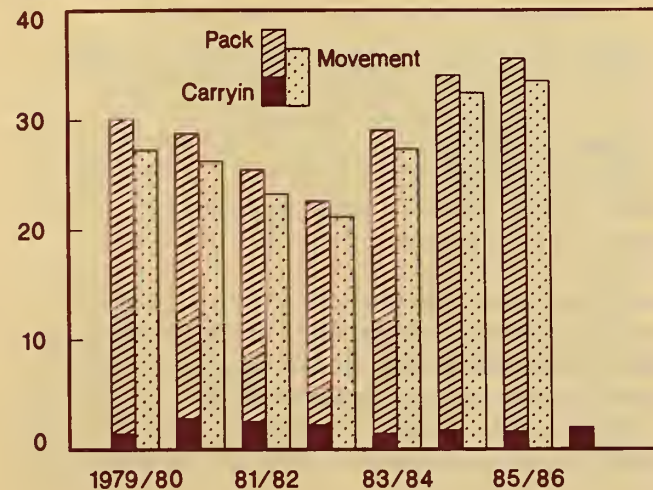
Million gallons*



* 40° BRIX. Pack includes imports. Year beginning December.

Florida Supply and Movement of Chilled Grapefruit Juice

Million gallons



In contrast, the total pack of canned grapefruit juice amounted to 4.1 million cases through February 14, down 18 percent from year-earlier levels. Due to higher prices, movement has moderately lagged behind last season's pace possibly because consumers prefer chilled and frozen concentrated grapefruit juice. Higher fruit costs have caused prices to rise to \$10.15 per dozen 46-ounce cans, compared with \$9 last a year. In light of slackened movement, prices are not likely to rise appreciably.

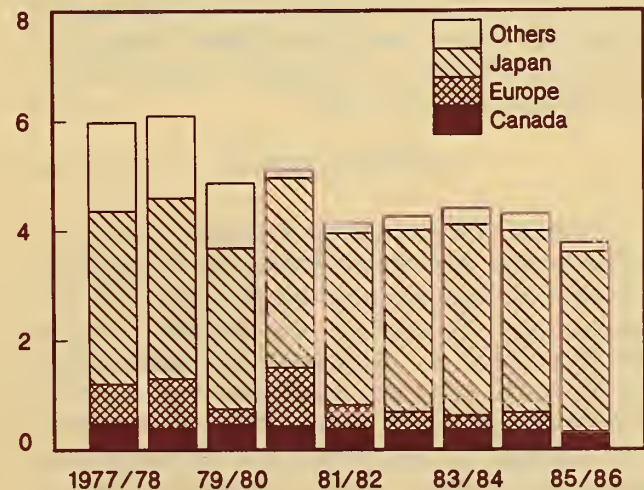
Lemons

The February 1 forecast for Arizona and California lemon production, at 24 million boxes, was down 5 percent from January but was 31 percent above last season's utilized production. The California crop is projected at 18.5 million boxes, 23 percent above last season, and the Arizona crop, at 5.5 million boxes, is 69 percent higher than last season's small utilized production. Harvest was 90 percent complete in Arizona and 41 percent in California as of February 1.

Because of the larger crop, total movement of lemons through mid-February rose 84 percent from a year earlier with increases indicated for all outlets, particularly processors. Processing use accounted for 59 percent of the total shipment. Exports also recorded strong gains, up 24 percent from a year ago. Exports to most countries rose sharply through December. Japan, America's leading customer, increased its purchases by

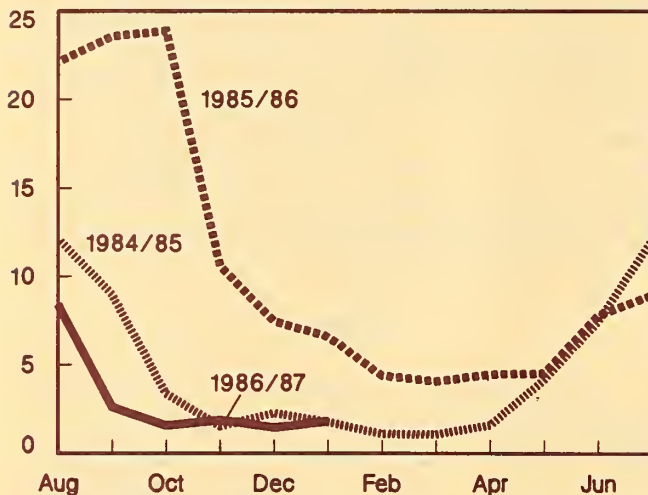
U.S. Exports of Fresh Lemons

Million boxes



All Lemons: U.S. Equivalent On-Tree Returns Received by Growers

Dollars per box



31 percent. However, Japan accounted for 86 percent of U.S. overseas shipments, a slightly smaller share than a year earlier. Exports to the EC totaled 1,539 metric tons; the EC had bought none by this time a year ago.

Recorded shipments to Canada were up 15 percent. During FY 1987, overseas shipments of U.S. lemons are expected to increase moderately because of larger available supplies and lower prices. However, a larger Spanish lemon crop will limit trade opportunity this season, even though the U.S.-EC citrus agreement eliminated the counter retaliatory duty imposed against U.S. lemons between November 1985 and August 1986.

Larger shipments have kept f.o.b. prices for fresh lemons well below the previous year. Through mid-February, the average f.o.b. price was \$8.83 a carton, compared with \$15.49 a year earlier. With remaining supplies moderately larger than a year ago, lemon prices are expected to average substantially lower this season than last.

OTHER CITRUS

Florida's Temple crop is forecast at 3.6 million boxes, unchanged from the January 1 forecast but 22 percent more than last season. As of February 1, the harvest was 18 percent complete. Shipments of Temples are running well below last season's pace. Because of the larger orange crop in Florida, a significantly smaller quantity of Temples was used for processing. Through late February,

processing use accounted for only 53 percent of the utilized crop, compared with 65 percent a year ago. In response to a large crop, f.o.b. prices for fresh Temples have averaged moderately below last season and are likely to continue on this path.

As of February 1, the U.S. tangerine crop was projected at 4 million boxes, down 4 percent from the January 1 estimate but 10 percent above last season. The Florida crop estimate is 1.4 million boxes, down 7 percent from January 1 but 22 percent larger than 1985/86. Harvest was 91 percent complete. The California crop forecast continues at 1.9 million boxes, up 6 percent from last season, while the Arizona crop forecast is the same as utilized production in 1985/86. As usual, more tangerines have been sold to the fresh market. Fresh shipments from Florida through late February were moderately above a year ago. Consequently, f.o.b. prices for Florida fresh tangerines have averaged moderately to substantially lower than last year and are likely to stay lower throughout this season.

The Florida tangelo crop, excluding K-early citrus fruit, is forecast at 4 million boxes unchanged from January 1 but 36 percent higher than last season. The active January harvest was 90 percent finished by month's end. Because of the larger crop, a significantly larger quantity of tangelos was used for processing through late February. As a result, processing use accounted for 68 percent of the utilized crop through February 23, compared with 55 percent last year. Fresh use was almost the same as a year earlier.

FRESH NONCITRUS

Utilized production of the leading noncitrus fruits, excluding avocados, totaled 12.97 million tons in 1986, down from 13.72 million in 1985 and 13.80 million in 1984. Grapes accounted for most of the decline, falling 9 percent from 5.65 to 5.15 million tons. Sharp declines were indicated in apricots (48 percent), dates (40 percent), prunes (33 percent), tart cherries (22 percent), and nectarines (18 percent). More modest declines were noted in figs, down 11 percent, and California plums, down 9 percent. The greatest percentage gains were in pomegranates, olives, pineapples, bananas, and sweet cherries. Apples and pears increased less than 1 percent.

Table 6.—Bearing acreage, fruits and tree nuts, United States, 1979–86

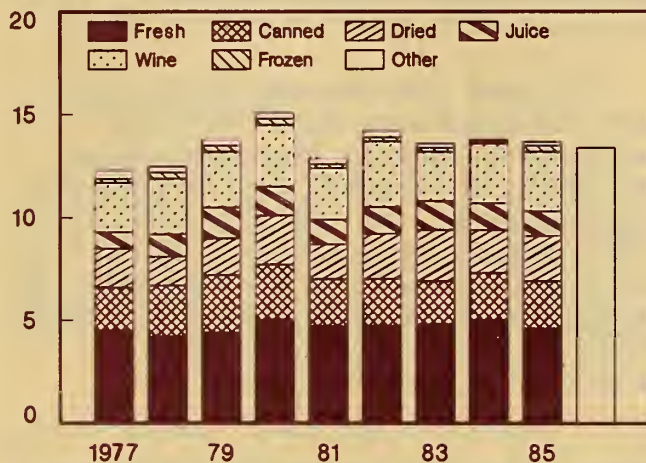
Year	Citrus fruit 1/	Major deciduous fruits 2/	Minor fruits 3/	Tree nuts 4/	Total fruits and tree nuts 5/
1,000 acres					
1979	1,136.0	1,649.4	218.3	538.5	3,542.2
1980	1,129.5	1,654.5	178.7	559.0	3,521.7
1981	1,298.0	1,628.6	197.9	560.9	3,685.4
1982	1,116.1	1,621.6	199.4	577.6	3,514.7
1983	1,084.0	1,693.8	204.5	598.5	3,580.8
1984	1,002.6	1,716.4	204.6	622.9	3,546.4
1985	894.1	1,736.9	206.2	655.8	3,492.9
1986 6/	805.1	1,767.1	126.0	670.7	3,368.9

1/ Grapefruit, lemons, limes, oranges, tangelos, tangerines, and Temples. Acreage is for the year of harvest. 2/ Commercial apples, apricots, cherries, grapes, nectarines, peaches, pears, plums, and prunes. 3/ Avocados, bananas, berries (until 1979), cranberries, dates, figs, kiwifruit (except 1979), olives, papayas, pineapples, and pomegranates. 4/ Almonds, filberts, macadamia nuts, pistachios, and walnuts. 5/ Some totals may not add due to rounding. 6/ Preliminary.

SOURCE: Noncitrus Fruits and Nuts Annual, NASS, USDA.

Noncitrus Fruits: Production and Utilization

Million short tons



1986 preliminary.

Total bearing acreage of noncitrus fruits decreased 3 percent in 1986, compared to 1985. Major declines in yields per acre occurred for apricots, dates, nectarines, and California prunes. Apple and grape yields also declined but less sharply.

The total value of utilized production of noncitrus fruits (excluding avocados, figs, California prunes, and kiwifruit) increased 9.7 percent, primarily reflecting increased value for apples and grapes. Apricots, tart cherries, dates, and olives all decreased in total utilized value.

Apples

Utilized Production Up Slightly

U.S. commercial apple production fell slightly in 1986, but utilized production rose slightly. Both 1985 and 1986 production and utilization were about 6 percent below 1984 figures. The U.S. totals mask some sharp changes that occurred in individual States. Washington, the leading apple-producing State, saw production increase 51 percent after rebounding from 1985's poor crop. Its share of total U.S. apple production dropped from 35.4 percent in 1984 to 25.9 percent in 1985 but bounced back to 39.2 percent in 1986. The increase in Washington apple production, however, was largely offset by declines of 36 percent in Michigan, 19.4 percent in California, and 13 percent in New York. Apple production increased about 6 percent in Pennsylvania and 22 percent in Virginia, the other leading apple-producing States.

Moderately Larger Stocks

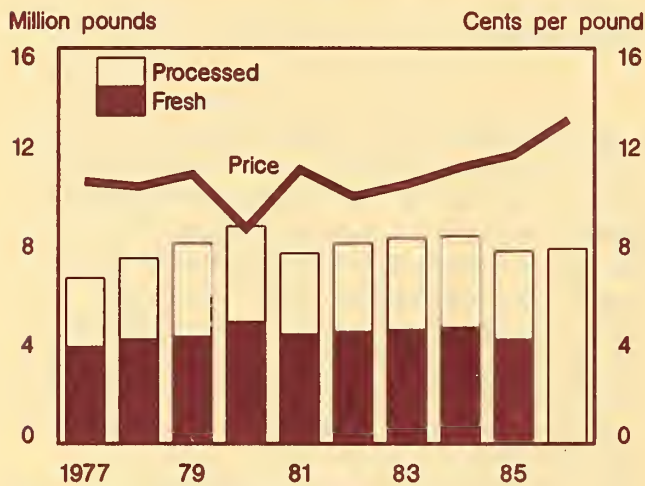
Stocks of fresh apples in cold storage totaled 28.8 billion pounds at the beginning of February 1987, about 8.6 percent above a year earlier. Similar to the commercial apple production situation, stocks are up 51 percent in Washington and down 26 percent in the other reporting States. About 83 percent of these apples are in controlled atmosphere storage, up from 75 percent a year ago. This

increase is due primarily to the increase in Washington's stocks.

Net Exports Up

The trade picture for apples improved in 1986 compared to 1985. Exports from July through December 1986 were more than 32 percent ahead of the same period last year, primarily due to increased sales to Taiwan, the Mideast and North Africa (mostly Saudi Arabia), Canada, and the United Kingdom. This improved export picture reflects ample U.S. supplies of fresh apples from Washington, a decline in the dollar's value, and increased promotional activities. Because of these factors, apple exports are projected to increase 30 percent in fiscal year 1987 over the year before. Apple exports have

U.S. Apple Production, Utilization and Prices



Utilized production. Season-average grower prices. 1986 indicated total production.

Table 7.—Apples, fresh cold storage holdings at end of the month, 1984-86

Months	1984	1985	1986
Million pounds			
January	2,460.5	2,464.2	2,125.2
February	1,887.5	1,858.1	1,550.2
March	1,354.4	1,372.3	1,039.3
April	912.2	910.4	612.6
May	396.8	485.1	267.2
June	237.8	291.2	118.8
July	97.2	131.9	25.4
August	8.9	34.4	7.9
September	1,235.5	1,712.2	2,349.5
October	4,154.1	3,668.3	4,124.7
November	3,808.9	3,342.5	3,531.6
December	3,171.5	2,724.7	2,891.7

SOURCE: Cold Storage, NASS, USDA.

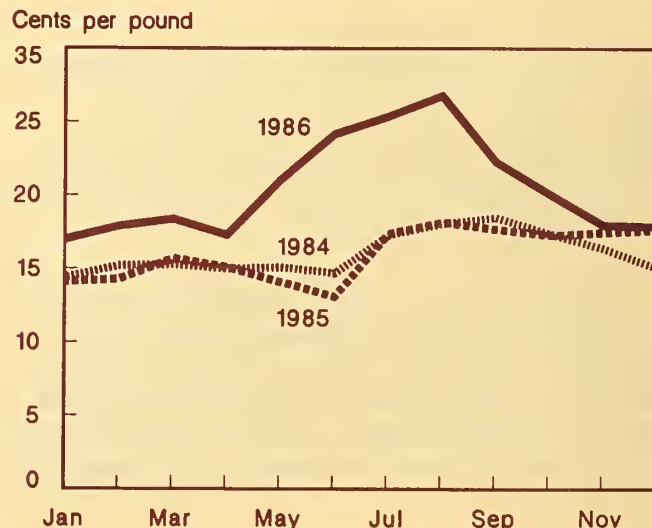
benefitted from the \$1.6 million approved for promotional and market development under the fiscal 1986 TEA program. Areas targeted for this assistance are the Far East, the Middle East, and Scandinavia for apples. Apple imports over the same July-to-December period fell 27 percent in 1986 compared to 1985.

Prices Continue Higher

Preliminary estimate of the season-average apple price per pound received by growers for the 1986 crop is 12 percent higher than in 1985 and 17 percent higher than in 1984. Price decreases for Washington Red Delicious were less than the average increase for the entire U.S. crop, partly because of the dramatic increase in Washington's supplies and the drop in supplies in most other regions. In mid-February, f.o.b. prices were quoted at \$14.00 compared to \$8.25 last year for extra fancy, tray pack cartons, sizes 88-113, Red Delicious apples from controlled atmosphere storage at Yakima Valley-Wenatchee, Washington.

Reported retail prices in 1986 for Red Delicious apples were above 1985 for all months up to November when they equaled last year's. In December, the 1986 price fell below December 1985. For all of 1986, Red Delicious apple prices at retail were 77.3 cents per pound, up 13 percent from 1985. For the balance of this season (through June 1987), strong demand may keep apple prices relatively high even with larger stocks.

Fresh Apples: U.S. Average Price Received by Growers



Avocados

Major Freeze Hits California Crop

Until the freezing temperatures of January 15 to 18 in most California avocado production areas, total U.S. production was headed for possible record levels. Despite the freezes, production is still expected to increase, following two consecutive year-to-year declines of about 18 percent from peak 1983/84 production of 9.7 million bushels. The exact damage to this year's crop is still not certain but early industry sources reported total losses could reach 1.9 million bushels (50 pounds per bushel). Growers reported extensive damage to the preliminary crop estimate of 11.1 million bushels, with an estimated 17 percent of the crop affected in most production regions.

Shipments from California this season through January rose 83 percent to 2.03 million bushels over the same date last season. Shipments through January also rose in Florida from the previous year.

Prices Sharply Lower

The prospective larger crop this season has resulted in sharply lower f.o.b. avocado prices in Southern California than the previous year. In mid-February, a two-layer pack carton of Hass 32-36 sizes in California was quoted at \$16, compared to \$27.50 a year ago.

The sharply larger remaining supplies are likely to keep prices weak.

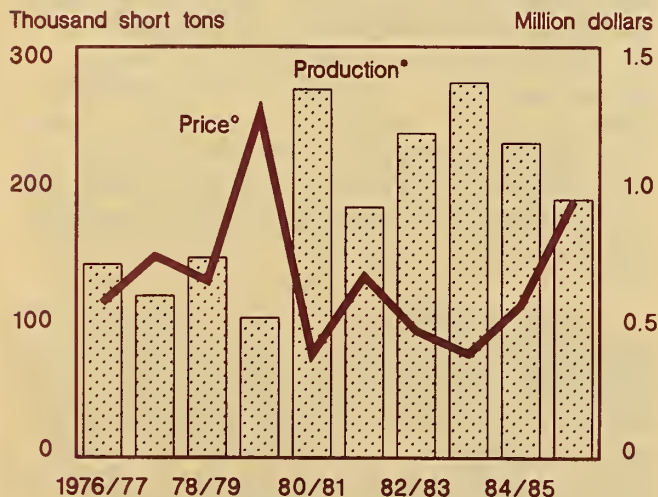
The average grower price per ton in California increased from \$582 in 1984/85 to \$1,000 in 1985/86 mostly in response to the 18-percent drop in production. The average grower price in Florida increased from \$390 in 1984/85 to 576 per ton in 1985/86. Primarily due to the increased prices, the total value of U.S. production increased from \$127.9 million to \$176.4 million in 1985/86.

Bananas

Banana imports in 1986 declined less than 1 percent to 2.94 million metric tons compared to 2.97 million in 1985. Major declines were from Honduras (down 10.7 percent) and Panama (down 26.6 percent). These declines were partially offset by increases from Costa Rica (up 5.1 percent) and Columbia (up 16.5 percent). Columbia recovered from adverse wind and drought, and an outbreak of black sigatoka disease that reduced 1985 exports to the United States to below previous years.

Smaller supplies resulted in a slight increase in banana prices. The 1986 retail prices in major U.S. cities averaged 38.5 cents a pound, up 5 percent from 1985.

U.S. Avocados: Production and Prices



• Total production. ○ Price season-average prices.

Table 8.—Fresh banana imports by country of origin, United States, 1983-86

Country	1983	1984	1985	1986
1,000 metric tons				
Colombia	375.5	468.9	439.4	511.7
Costa Rica	580.8	585.1	534.5	561.5
Ecuador	446.2	499.6	720.4	733.4
Guatemala	212.7	182.8	246.8	282.3
Honduras	499.3	537.0	568.6	507.6
Nicaragua	61.9	68.0	46.7	0
Panama	221.0	177.0	343.5	252.2
Other	47.3	58.8	68.9	94.3
Total	2,444.7	2,577.2	2,968.8	2,943.0

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

Grapes

1986 Crop Down Slightly

U.S. utilized grape production in 1986 was 5.15 million tons, down 9 percent from 1985 and about the same as the 1984 utilized crop. California accounted for about 91 percent of total U.S. utilized grape production in 1986, even though its utilized production declined 11 percent from 1985. The decline in raisin and table type grapes from 1985 to 1986 more than offset the slight increase in wine type grapes. The 1986 total U.S. bearing acreage was estimated to be up slightly to 791,890 acres.

Total grape production rose in States other than California. Producing States next in importance to California were New York and Washington where production increased 14 and 34 percent, respectively. Production also increased 20 percent in Pennsylvania, 24 percent in Arizona, and 14 percent in Ohio. A sharp 37-percent decline occurred in Michigan due to heavy spring frosts and rain during bloom.

Utilization Decreased Moderately

In 1986, only 92 percent of total U.S. production was used, down from 99.5 percent in 1984 and almost 100 percent in 1985. The reduced utilization was attributed to the 1986 Raisin Diversion Program, which left a large quantity of grapes unharvested. The

proportion of the total utilized grape crop used for fresh has increased from 13.1 percent in 1984 and 13.8 percent in 1985, to 14.2 percent in 1986. The total quantity used for fresh declined from 781,090 tons in 1985 to 737,920 in 1986, a 6-percent drop. However, the total value of fresh grapes rose sharply from \$228 million in 1985 to \$339 million in 1986 due to price recovery.

Grapes used for processing decreased substantially in 1986 compared to the previous year but were slightly below 1984. The decline in processed utilization was primarily due to a 31-percent decline in the quantity of grapes used for drying as quantities used for both wine and juice increased. The small quantity of grapes for canning decreased 11 percent from 1985.

Prices Up Sharply

Grape prices for the fresh market rose sharply in 1986 following significant declines from 1984 to 1985, reflecting reduced supplies and relatively strong demand. The U.S. average price for fresh grapes is tentatively estimated at \$463 per ton, up 59 percent from \$292 per ton in 1985 (the lowest price since 1974). Higher prices were indicated in all States except New York and Washington, which are relatively minor grape-producing States as 96 percent of the grapes for fresh use are from California.

The U.S. grower price for all processed grapes increased 14 percent, from \$152 per ton in 1985 to \$173 in 1986. Prices were up in all States except Missouri, which had a 14-percent decline. The price per ton for grapes used for canning in 1986 was \$210, down from \$213 in both 1984 and 1985. Prices for grapes used for wine increased 10 percent from 1985 to 1986 to \$178 per ton. Prices for grapes used for crushing into juice were \$181 per ton in 1986, 40 percent above 1985.

Retail prices in major U.S. cities for Thompson seedless grapes rose an average 20.1 percent to \$1.14 per pound for all 1986 compared to 1985. Emperor grape prices were off slightly. Total seasonal shipments for fresh grapes through February 7, 1987, fell slightly from the same period last year.

U.S. Grapes: Utilization

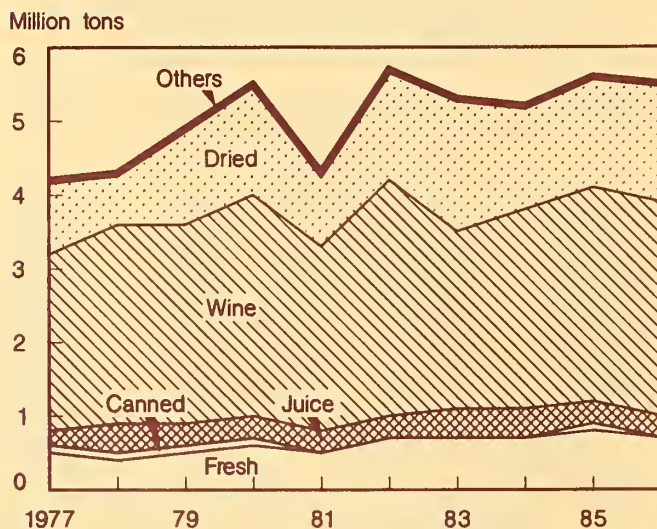


Table 9.—Pears: Utilized production by States and Pacific Coast, variety composition, 1984-86

State	1984	1985	1986	Pacific Coast	1984	1985	1986
	Short tons				Short tons		
Connecticut	1,450	1,500	1,600	Washington:			
New York	20,000	16,000	18,000	Bartlett	101,000	111,000	126,000
Pennsylvania	3,150	2,300	3,000	Other	103,000	114,000	136,000
Michigan	11,000	8,000	11,000	Total	204,000	225,000	262,000
Colorado	4,550	5,900	1,750	Oregon:			
Utah	3,100	2,500	2,200	Bartlett	44,000	75,000	50,000
Washington	204,000	225,000	262,000	Other	106,000	118,000	110,000
Oregon	150,000	193,000	160,000	Total	150,000	193,000	160,000
California	299,500	292,500	294,000	California:			
United States	696,750	746,700	753,550	Bartlett	289,500	282,000	285,000
				Other	10,000	10,500	9,000
				Total	299,500	292,500	294,000
				3 States:			
				Bartlett	434,500	468,000	461,000
				Other	219,000	242,500	255,000
				Total	653,500	710,500	716,000

SOURCE: Monocultus Fruits and Nuts Annual, NASS, USDA.

Pears

Slightly Smaller Crop

U.S. pear production in 1986 totaled 759,550 tons, less than 2 percent above 1985. Total production increased 16 percent in Washington, was down 17 percent in Oregon, and increased slightly in California. Utilized production increased in all States except Utah, Oregon, and Colorado. Colorado's production dropped sharply from 5,900 short tons in 1985 to 1,750 in 1986.

Bartlett production used in Washington, Oregon, and California was 461,000 tons in 1986 down from 468,000 tons in 1985 but up 6 percent from 434,500 tons in 1984.

Remaining Supplies Up

At the beginning of February, cold storage stocks in all warehouses were 171 million pounds, 20 percent above the same period last year. Total shipments through February 7, 1987, were up 3 percent from the previous year, reflecting strong demand. December 1986 retail prices for D'Anjou pears rose 5 percent from 1985. For the entire year, prices averaged 76.8 cents per pound, up 9 percent from 1985.

In mid-February, f.o.b. prices of D'Anjou, sizes 90-135, standard box carton at Yakima,

Table 10.—Pears, fresh cold storage holdings at end of the month, 1984-86

Months	1984	1985	1986
	1,000 pounds		
January	211,740	134,179	142,878
February	172,748	89,887	101,326
March	122,231	59,072	71,575
April	80,516	34,070	35,100
May	36,741	10,280	4,932
June	4,080	1,531	712
July	6,253	5,054	75,008
August	100,006	92,529	130,001
September	396,085	398,699	325,123
October	303,560	298,851	333,177
November	243,556	222,220	281,227
December	180,834	183,162	214,698

SOURCE: Cold Storage, NASS, USDA.

Washington, were quoted at \$16.50 per carton, compared to \$15.60 a year ago. With seasonal decline in supplies, prices are likely to stay up.

The average grower price for all pears is tentatively estimated at \$280 per ton in 1986, up 4 percent from the previous year. However, fresh prices rose almost 13 percent to \$393 per ton, while prices for processing (excluding dry) declined 16 percent to \$169 per ton. The total value of production in 1986 was about 5 percent above 1985.

Exports Up Sharply

Exports of fresh pears through December 1986 were running 41 percent ahead of the same period last year. A push for major increases in exports through promotion and market development under the TEA included efforts in Sweden and Saudia Arabia. Ample supplies and the decline in U.S. dollar value also contributed to favorable exports to date. Total pear offshore exports (excluding Canada) is forecast to be up 27 percent in fiscal 1987. Imports rose just 5 percent for the same season last year. Net exports through December 1986 equaled 45.8 million pounds, or about 3 percent of U.S. total 1986 production.

PROCESSED NONCITRUS FRUIT

Less production of most noncitrus fruit in 1986 has led to a smaller pack of most canned fruit during 1986/87. Combined with reduced carryin stocks, supplies of the leading canned fruits are smaller than last season. Movement of canned fruit has improved, and remaining supplies for some canned fruit items are tight. Consequently, prices have strengthened. Dried fruit supplies are also smaller and with improved movement, prices have been firm. Stocks of frozen fruit and berries are mixed. Supplies of frozen strawberries and tart cherries are smaller than a year ago, while blackberry and boysenberry stocks are significantly larger.

Canned

The 1986/87 pack of noncitrus fruit reflected the decrease in supply of raw products. The 1986/87 pack of California cling peaches, fruit cocktail, fruit for salads, pears, and apricots slowed considerably from the preceding season. Because of the smaller crop in Michigan, the total pack of canned tart cherries declined significantly. The tonnage of sweet cherries for canning also declined significantly from 1985. Although the packing season for canned apple items is not over yet, the smaller apple crops from the Eastern and Central States will reduce the canned apple-product pack.

Movement of canned fruit including cling peaches, pears, fruit cocktail, and mixed fruit has improved significantly during the first 5

months of 1986/87. Exports have been strong. Markets are particularly strong in the East Asia and Pacific regions. Strong gains are shown for canned tart cherries, peaches, pears, pineapples, and mixed fruit. Recorded exports to Canada show a mixed pattern.

After a long negotiation with the United States, the EC agreed to take appropriate steps to reduce subsidies to its canned fruit processors. In July 1986, the EC cut its subsidy to canned peach processors by 25 percent, and the EC has agreed to eliminate the processing element of its subsidy program by July 1987. This allows U.S. canned peaches to compete with the EC products more equitably in the United States and foreign markets. Furthermore, the dollar's decline, combined with the infusion of \$5.6 million of TEA funds, should increase U.S. exports of canned fruit to their highest levels in several years. Most growth is expected to be to the targeted East Asian markets, especially Japan.

Because of the improved shipments, stocks of several canned fruit items are tight. Consequently, U.S. packers have hiked prices for several items. The BLS January producer price index, at 270 (1967=100), was 2 percent above a year ago. Prices are expected to remain firm throughout the season.

Dried

Supplies of dried fruit during the balance of the season are smaller than a year ago. Demand for dried fruit is strong, and prices have been firm.

With the smaller California utilized grape crop, raisin output is currently estimated at 265,000 tons, down 26 percent from last season. Through January 31, deliveries of raisins to handlers totaled 369,286 tons, including 99,333 tons from last year's diversion program, down 7 percent from a year ago. Total shipments of raisins so far this season (August-January) were slightly ahead of last season's pace due entirely to sharply increased exports. Larger exports have resulted from the weak dollar and increased export promotion. Exports to the EC showed strong gains, with sales to the United Kingdom, our leading European market, up 76 percent through December. However, Japan, our leading customer, purchased only a slightly larger quantity than a year ago. The export

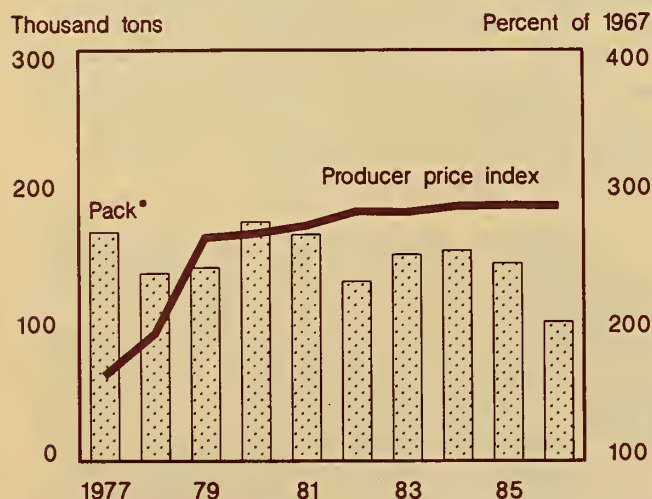
outlook for the current season appears favorable.

Since the beginning of 1986, strong demand has pushed raisin prices above a year ago. The BLS January producer price index, at 378.8 (1967=100), was 11 percent above a year earlier. Prices are expected to remain higher during the balance of the season. The Raisin Administrative Committee has again approved a Raisin Diversion Program for 1987.

The output of dried prunes in 1986 was well below 1985. An estimated 96,800 tons (dried basis) were produced in California, down 30 percent. Consequently, with only slightly larger carryin stocks, the total supply for the season indicates a sharp decrease from last season.

Despite strong prices, shipments of dried prunes are running well ahead of last year's pace. A moderate carryover is expected at the end of the marketing season. Increased shipments were reported for both domestic markets and exports. The largest increase in the domestic market was for pitting. Exports showed strong gains, with sharp increases recorded in Europe and Asia. An expanded market development program in Europe and the dollar's declining value have contributed to the increase. To spur European demand for dried prunes, USDA has authorized a \$4-million export assistance program to eight West European countries in fiscal 1986. Through December 31, exports to West Germany have risen 30 percent from a year

U.S. Dried Prunes



* Pack—processed weight. 1986 preliminary.

ago. However, Japan still remains the leading customer with a 33-percent larger purchase over a year earlier. Overall, U.S. exports of dried prunes to offshore markets are forecast to increase by 13 percent to 54,000 tons in fiscal 1987 despite reduced supplies this season.

With the higher volume of shipments, the supply of dried prunes at the end of January was well below previous-year levels. Despite strong shipments, wholesale prices of dried prunes have remained steady. The January producer price index, at 286.4 (1967=100), remained unchanged from a year ago.

Frozen

The total supply of frozen noncitrus fruits and berries in cold storage as of February 1 was slightly below a year ago. Decreases in blueberries, tart cherries, red raspberries, and strawberries more than offset increases in blackberries, boysenberries, and other miscellaneous frozen fruit.

Stocks of strawberries were down 7 percent from a year ago. Smaller carryin stocks and strong demand have mainly contributed to the decrease. However, imports of frozen strawberries during the first month (December) of 1986/87 increased sharply from a year ago. Most of the imports have been from Mexico, with a small quantity

Table 11.—Stocks of frozen fruit:
End of January, 1984-87

Frozen fruit	1984	1985	1986	1987 1/
Thousand pounds				
Apples	78,654	61,902	69,361	69,511
Apricots	6,261	9,435	5,638	3,492
Blackberries	10,295	10,883	11,485	15,656
Blueberries	51,493	44,944	55,079	42,955
Boysenberries	1,864	2,466	1,741	2,441
Cherries, tart	42,385	74,523	139,226	127,910
Cherries, sweet	11,333	12,870	13,315	11,161
Grapes	7,625	6,742	5,082	2,228
Peaches	36,700	46,399	35,019	32,353
Raspberries, red	21,028	24,458	21,606	23,839
Strawberries	171,505	152,762	137,719	128,317
Other	177,324	176,245	161,211	179,308
Total	616,467	623,629	656,482	639,171

1/ Preliminary.

SOURCE: Cold Storage, NASS, USDA.

coming from Poland. Because of strong movement, prices have been firm and are expected to stay above a year ago in view of sharply reduced stocks.

Stocks of frozen tart cherries were also below last year's level. Because of the smaller crop in Michigan, tonnage of tart cherries delivered to freezers was sharply smaller than the previous season. However, the significantly increased carryin stocks have kept supplies of frozen tart cherries adequate.

BERRIES

Strawberries

Crop Up Fractionally

U.S. commercial strawberry production totaled 1,019 million pounds in 1986, up fractionally from 1985 because of increased acreage. Yield per acre dropped fractionally. However, the increased production is inconsistent across the States. Winter strawberry production in Florida, accounting for 9 percent of the U.S. crop, fell 14 percent because of decreased acreage and lower yields. In contrast, California, which accounted for 77 percent of the U.S. crop, registered a 2-percent gain, reflecting increased acreage. Crops in New York and Oregon also registered substantial increases, while Michigan and Washington had much smaller crops because of freezes in the winter and spring.

Because of sharply reduced imports in 1985/86 (December–November) and higher prices in California and Oregon, more

Table 12.—Strawberry imports, United States, 1980–86

Calendar year	Fresh	Frozen
	Million pounds	
1980	12.7	79.7
1981	6.7	60.1
1982	4.5	34.9
1983	5.1	42.5
1984	8.8	50.9
1985	9.6	59.7
1986	12.8	50.7

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

strawberries were processed in 1986 than 1985. Consequently, the portion of California strawberries marketed fresh fell from 75 to 73.7 percent. In Oregon, 92 percent of the crop was delivered to freezers in 1986, compared with 91 percent in 1985. Overall, processing use accounted for 28 percent of the 1986 U.S. crop, compared with 26 percent in 1985. Strong demand kept grower prices much higher than 1985. The U.S. average price for strawberries for all sales was \$49.40 per cwt, compared with \$44.30 in 1985, with higher prices indicated for both fresh market and processing uses. The total value of production amounted to \$504 million, up 12 percent from 1985.

Reduced Strawberry Imports

The 1986 imports of fresh strawberries totaled 5,817 metric tons, 27 percent above 1985, while total imports of frozen strawberries decreased to 22,007 metric tons, an 18-percent drop. Most imports of both fresh and frozen strawberries originated in Mexico. The decreased Mexican shipments resulted from freezing temperatures last January that reduced total strawberry supplies. However, New Zealand continues to increase shipments of fresh strawberries to the United States and remains the second largest supplier. Poland remains the second leading supplier of frozen strawberries to the United States.

1987 Winter Crop Prospects

As of January 1, Florida winter strawberry harvested acreage for 1987 was expected to be 4,900, unchanged from the 1986 crop. The crop is in good condition. Harvest of the commercial crop is underway in the Hillsborough–Manatee area. A good volume is expected into early May, with peak supplies expected in late March. Size and quality have been mostly good.

Opening f.o.b prices in early December for fresh strawberries at western and central Florida were quoted at \$16 per 12 pints (medium to large), compared with \$24 a year earlier. With increased supplies, prices have dropped sharply. In mid-February, f.o.b. prices continued to fall to \$12, compared with \$11 a year ago. Prices are expected to fall further when California strawberries are marketed in early March.

TREE NUTS

The 1986 U.S. tree nut production, at 568,900 tons, was 27 percent less than in 1985 and 34 percent below the 1984 output. Smaller crops were reported for almonds, filberts, pecans, and walnuts, while macadamia nut and pistachio crops were larger. However, bearing acreage for most tree nuts in 1986 rose from the 1985 level. Smaller crops of almonds, pecans, and filberts have strengthened grower prices, but lower grower prices are tentatively estimated for pistachios. Reflecting strong demand, grower prices for macadamia nuts have averaged substantially higher than last season.

The value of 1986 utilized production of these edible nut crops, excluding walnuts, is estimated at \$855 million, up 54 percent from a year ago and 24 percent above 1984. Crop value increased for all 1986 tree nuts except the walnut value, which will be available July 1, 1987.

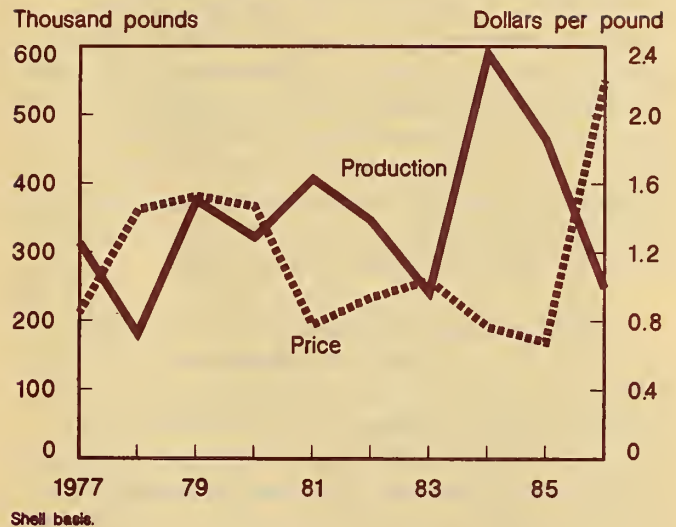
Almonds

Production Decreases Again

California's 1986 production of almonds was 250 million pounds of nut meats, 46 percent less than the 1985 crop and 58 percent below the record-high 1984 production. However, the bearing acreage continued to trend upward to 418,000 in 1986, slightly higher than 1985. Production could resume the upward trend in years ahead. With a sharply reduced carryin stock, the 1986/87 almond supply is well below 1985/86. Because of higher prices and short supplies, almond shipments to date have been sharply lower than a year ago for export markets and moderately lower for domestic markets.

According to the Almond Board of California, total almond shipments during the first 7 months of 1986/87 (July-January) amounted to 214 million pounds, a decrease of 32 percent from a year ago. Export shipments totaled 125 million pounds, down 44 percent. The decrease was shared by most major importing countries. Reduced shipments were reported to all the Western European countries except Switzerland. West Germany, the leading importer of U.S. almonds, showed a decline of 47 percent from a year ago.

U.S. Almond Production and Prices Received by Growers



Purchases of almonds in Eastern Europe were only 44,000 pounds to date, compared with 55.1 million pounds a year ago, mostly from the Soviet Union. During the first 7 months of 1985/86, shipments to West Germany and the Soviet Union accounted for a combined 50 percent of the total. On the other hand, Japan, the third largest buyer, has bought 44 percent more.

Almond shipments to domestic markets totaled 89 million pounds during July 1986-January 1987, down 5 percent from a record high a year ago.

Because of sharply reduced supplies, almond prices have been strong. The 1986 average grower price for almonds is tentatively estimated at \$2.20 a pound (shelled basis), compared with \$0.68 in 1985. Because of tight supplies, major California packers have remained withdrawn from the market, shipping only products ordered by regular customers earlier in the year. Almond prices at all levels are expected to stay strong.

Pecans

Moderately Smaller Production

The preliminary 1986 estimate of U.S. pecan production is 225 million pounds in-shell basis, 8 percent less than the 1985 crop and 3 percent below 1984. The smaller native and seedling crop more than offset increased production of improved varieties.

Consequently, the native and seedling crop, which accounted for only 27 percent of production, is placed at 60 million pounds, down 34 percent. The decrease was primarily attributed to a sharply smaller crop in Texas. Georgia, the leading producer, expects to harvest 95 million pounds, up 14 percent. Even with a sharply smaller crop, Texas remains the second largest producing State, although it recorded a 49-percent decrease from the previous year's large crop.

Cold storage holdings of shelled pecans, at 27 million pounds at the beginning of February, were 64 percent above a year ago, while in-shell holdings, at 112 million, were the same as last year. Even with the sharply larger carryin stocks, the smaller crop still indicates that shipments have been running behind last season's pace. Consequently, sellers have lowered their prices.

The preliminary estimated season-average grower price is 84.8 cents a pound, compared with 68 cents the previous season. Higher prices were indicated for both improved varieties and the native and seedling crop. Despite the smaller crop, the higher price has pushed the total value of the crop to \$191 million, up 15 percent from 1985.

Walnuts

Production Down Sharply

The preliminary production estimate for California's 1986 walnut crop at 180,000 tons (in-shell basis) is the smallest since 1978, and is 18 percent below the 1985 crop and 15 percent less than the 1984 crop. Thus, with the smaller carryin stock, the total supply of walnuts during 1986/87 is well below last season. Movement this season through January rose slightly.

According to the Walnut Marketing Board, in-shell walnut shipments during the first 6 months of 1986/87 (August-January) totaled 126 million pounds, up fractionally from a year ago due entirely to 13-percent larger exports. Domestic shipments showed a sharp drop, accounting for 29 percent of the total shipment compared with 37 percent a year ago.

Most of the increase in exports of in-shell walnuts was attributed to larger shipments to Japan, the Netherlands, and West Germany.

Japan opened its market to U.S. in-shell walnut exports late in fiscal 1986. Increased exports to the EC, particularly West Germany, were primarily attributed to the European Community's roll back of its counter-retaliatory import duty on U.S. in-shell walnuts to 8 percent from 30 percent.

In contrast, shipments of shelled walnuts during the same period declined slightly to 71 million pounds as decreased domestic shipments more than offset increased exports. Consequently, domestic markets accounted for 89 percent of total shelled shipments. The export market, although small, is generally strong, with significant increases in shipments to Japan, Canada, and West Germany. Consequently, Japan has replaced West Germany as the leading importer of shelled walnuts to date.

With higher prices, domestic shipments of walnuts are likely to remain weak. If the dollar continues to weaken, exports are expected to stay strong. In addition, with the recent approval of the TEA fund, increased promotional activities for walnuts will further improve exports to Europe and the Far East.

Other Tree Nuts

The 1986 filbert crop in Oregon and Washington totaled 15,500 tons, 37 percent less than 1985's record-high production but 16 percent more than the 1984 crop. Smaller crops were reported for both States despite continued increase in bearing acreage. The 1986 yield per acre declined to 0.62 tons (in-shell basis), from 1.06 in 1985. Even with greatly increased carryin stocks, the smaller crop still resulted in a total domestic supply well below that of 1985.

Due to a sharply larger crop in Turkey, filbert supplies in major producing countries for the 1986/87 marketing season are 11 percent larger than last season. Turkey's crop is estimated at 300,000 tons, in-shell basis, up 43 percent from last season's unusually low level. Production in other major producing countries is down. Because of sharply reduced stocks in Turkey, this season's world carryin stocks are well below a year ago and only one-half the quantity carried in 2 years ago.

U.S. shelled filbert imports during the first 5 months of 1986/87 (August-December)

totaled 267 metric tons, down 62 percent from a year ago. Most imported filberts consumed in the United States are from Turkey, the leading producer. Imports from Turkey fell significantly, by 68 percent from the previous year. U.S. importers have been extremely hesitant to import Turkish filberts for fear of radiation contamination from the Soviet Union's Chernobyl nuclear plant. In contrast, U.S. exports of both shelled and in-shell filberts during the same period more than doubled year-earlier levels. Reports of radiation contamination of some Turkish filberts have created uncertainties in world trade and may mean greater demand for U.S. filberts. The greater demand and reduced supplies have made U.S. filbert prices strong. The preliminary estimate for the 1986 grower price is \$738 a ton, up 9 percent from 1985.

Because of the continued increase in bearing acreage, the 1986 Hawaii macadamia nut crop is estimated at 44 million pounds (in-shell basis), up almost 5 percent from the previous year. The 1986 bearing acreage was 14,400, an increase of 7 percent from 1985 in continuation of this upward trend. Production is expected to trend upward in the years ahead. Reflecting strong demand, the 1986

season-average grower price is estimated at 80 cents a pound, up 7.5 cents from 1985.

The California pistachio crop totaled a record high 74.9 million pounds (in-shell basis) in 1986, 176 percent more than 1985 and 19 percent above 1984. Of this total, 53.5 million pounds or 71 percent of the crop were marketable in-shell. The larger crop reflects the production cycle and continued increase in acreage. The 1986 bearing acreage is estimated at 32,000, up slightly from 1985. However, the 1986 yield per acre was 2,340 pounds, compared with 860 in 1985.

A sharply larger Iranian pistachio crop is also reported, up 35 percent from the 1985 crop of 61,000 tons. U.S. imports of pistachios, mostly from Iran, totaled 264 metric tons during the first 4 months of 1986/87 (September-December), down 97 percent from the corresponding period a year ago. U.S. imports are expected to remain extremely low because of the 284-percent duty on raw Iranian pistachios and 318-percent duty on Iranian roasted pistachios. Nevertheless, the record U.S. crop caused the season-average grower price to fall to \$1.19 a pound, down 12 percent from 1985.

THE OUTLOOK FOR U.S. WINE IMPORTS

by

David Blandford and Gerald B. White*

ABSTRACT: Appreciation of the dollar against the French franc and the Italian lira accounted for between 63 and 100 percent of the increase in U.S. wine imports between 1980 and 1984. The greatest impact of dollar appreciation was among the lower priced French wines, imports of which are the most sensitive to changes in real prices. U.S. income growth also contributed to expansion in wine imports. This article describes the current situation and underlying factors affecting U.S. wine imports, and assesses implications arising from changes in the exchange rate and U.S. income on the outlook for imports of French and Italian wines.

Keywords: Wine, imports, exchange rates, France, Italy.

Introduction

Imports have become increasingly important in the U.S. wine market. In 1975, 49 million gallons were imported, representing 13 percent of total U.S. consumption. In 1985, imports totaled 137 million gallons or 24 percent of consumption. The largest proportion of these imports is in the form of still wine. Virtually all wine imports come from the European Community (EC12), with Italy and France being the largest suppliers.

United States Supply and Demand

Per capita wine consumption in the United States grew rapidly during the 1970's, rising from 1.31 gallons in 1970 to 2.02 in 1979, an annual increase of 5 percent. This growth has slowed during the 1980's. Consumption rose from 2.12 gallons per capita in 1980 to 2.42 in 1985, an annual increase of about 3 percent.

The 4-percent increase in total wine consumption from 1984 to 1985 was due primarily to the tremendous growth in wine coolers. Growing consumer health concerns, changes in minimum drinking age legislation, and a trend toward lower calorie and lower alcohol-content beverages have weakened the demand for table wines.

The net effect of these changes has been smaller growth than anticipated by growers and vintners, considering the expansion of vineyard and winery capacity in the United States and abroad. U.S. grape production averaged 4.77 million tons annually during 1976-80, and 5.46 million in 1981-85 (see figure 1). California grapes crushed for wine averaged 2.52 million tons in 1976-80 and 2.66 million in 1981-85. Thus, it is not surprising, given expanded U.S. production and imports and the slower growth in U.S. consumption, that prices of domestic grapes and wine have fallen.

The Consumer Price Index for table and dessert wine increased by 1 percent from 1984 to 1985, after 2 consecutive years of decline. Prices to growers for wine grapes have fallen each year since 1981 (see figure 1). Preliminary indications point to a price increase for the 1986 season.

* Associate professors in the Department of Agricultural Economics, Cornell University, Ithaca, New York. This article draws upon research funded under Cooperative Agreement with the Economic Research Service, U.S. Department of Agriculture.

Imports

Imports of still wine have expanded even as domestic consumption has slowed. 1/ Still wine imports increased by 27 percent in volume and value between 1980 and 1985 (see figure 2). Still wine makes up the largest proportion of total wine imports, accounting for more than 80 percent of the total.

1/ Still wine includes TSUSA number 167.3020, 167.3040, 167.3200, 167.3005, 167.3015, 167.3025, 167.3030, 167.3045, and 167.3060. It excludes champagne and other sparkling wine, nongrape wines, fortified wines and vermouth.

Figure 1
U.S. Grape Production and Wine Grape Prices

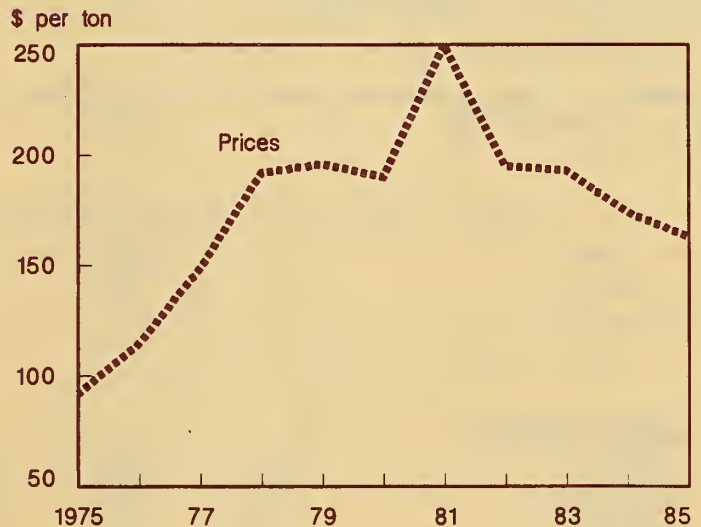
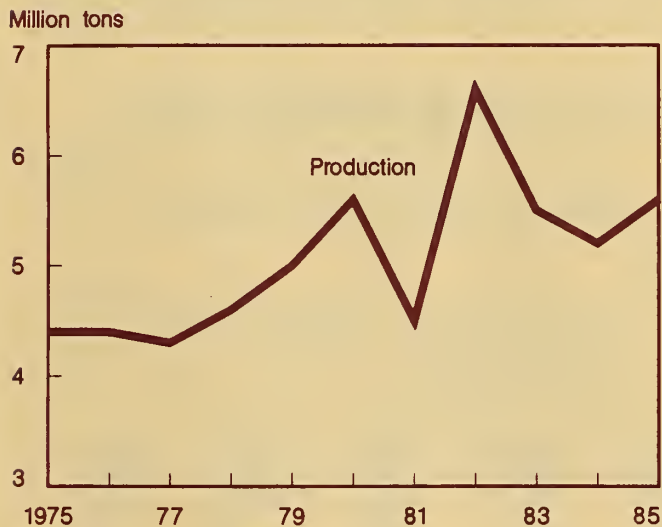
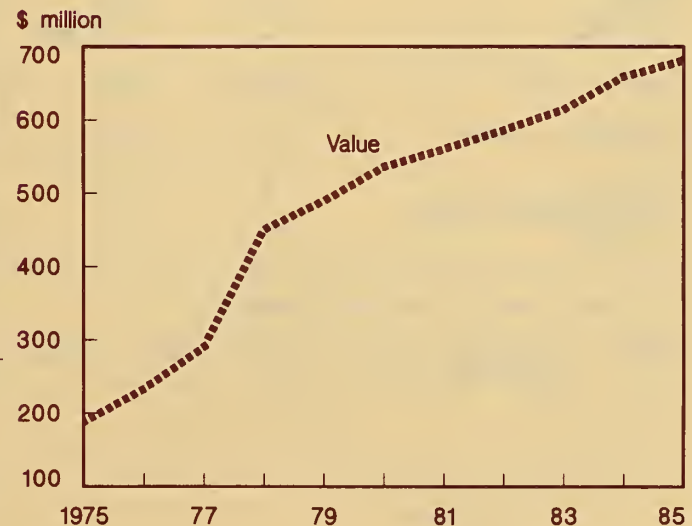
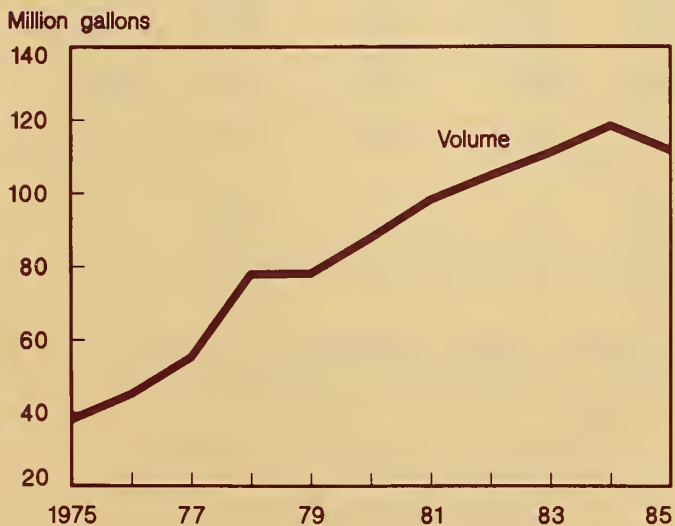


Figure 2
U.S. Imports of Still Wine



Still wine imports are dominated by Italy and France (see tables 1 and 2), with West Germany also an important source. With the recent inclusion of Spain and Portugal in the Community, the EC will supply over 95 percent of U.S. still wine imports.

In value, imports now amount to more than \$680 million (see figure 2). France, with just 25 percent of import volume in 1985, accounted for 43 percent of the value. Conversely, Italy, with 52 percent of the volume, accounted for 34 percent of the value. The "quality," or higher priced, end of the market is occupied primarily by French and to a lesser extent German wines, while the lower priced end is occupied by Italian wines.

Table 1.—U.S. imports of still wine, by country of origin, 1975 and 1980-85

Country	1975	1980	1981	1982	1983	1984	1985
Million gallons							
European Community							
Italy	11.9	54.3	59.9	63.0	63.4	62.9	58.5
France	7.4	11.4	15.1	18.1	22.3	27.9	27.6
West Germany	6.1	11.7	13.0	13.2	15.1	16.0	14.3
Other EC	.7	.6	.8	1.0	1.1	1.0	1.4
Total EC 1/	26.1	77.9	88.8	95.3	101.8	107.8	101.8
Other							
Spain	4.2	1.6	1.5	1.5	1.3	1.8	1.5
Portugal	6.7	5.7	5.4	5.0	4.6	4.9	4.5
All other	1.2	2.7	2.7	3.0	3.4	3.9	3.9
Total world 1/	38.2	87.9	98.3	104.9	111.1	118.4	111.7
EC percent of total	68.4	88.6	90.3	90.9	91.6	91.0	91.1
EC, Spain, and Portugal percent of total	96.9	96.9	97.4	97.0	96.9	96.7	96.5

1/ Totals may not add due to rounding.

SOURCE: Foreign Agricultural Service, USDA, Foreign Agricultural Circular, Horticultural Products, March 1986.

Table 2.—Value of U.S. still wine imports, by country of origin, 1975 and 1980-85

Country	1975	1980	1981	1982	1983	1984	1985
Million dollars							
European Community							
Italy	44.7	241.4	229.8	238.8	243.4	240.1	229.5
France	65.0	141.0	172.9	188.6	211.2	259.3	294.1
W. Germany	33.4	94.1	97.3	98.5	103.3	101.3	95.6
Other EC	2.8	2.3	2.1	6.1	5.8	5.3	9.3
Total EC 1/	145.9	478.8	502.1	532.0	563.7	606.0	628.5
Other							
Spain	11.1	9.9	9.0	9.2	8.2	10.0	8.8
Portugal	27.3	32.7	30.8	28.7	23.6	24.4	25.7
All other	4.3	14.4	18.1	16.1	18.5	18.6	18.9
Total world 1/	188.6	535.8	560.0	586.0	614.0	659.0	681.9
EC percent of total	77.4	89.4	89.7	90.8	91.8	92.0	92.2
EC, Spain, and Portugal percent of total	97.7	97.3	96.8	97.3	97.0	97.2	97.2

1/ Totals may not add due to rounding.

SOURCE: Foreign Agricultural Service, USDA, Foreign Agricultural Circular, Horticultural Products, March 1986.

Determinants of French Imports

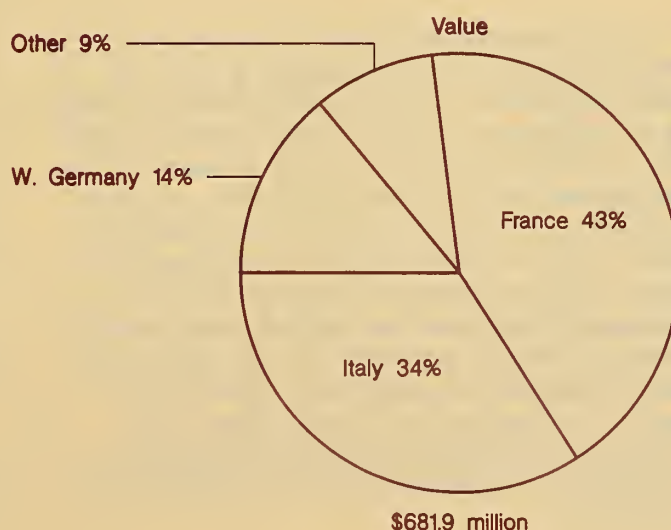
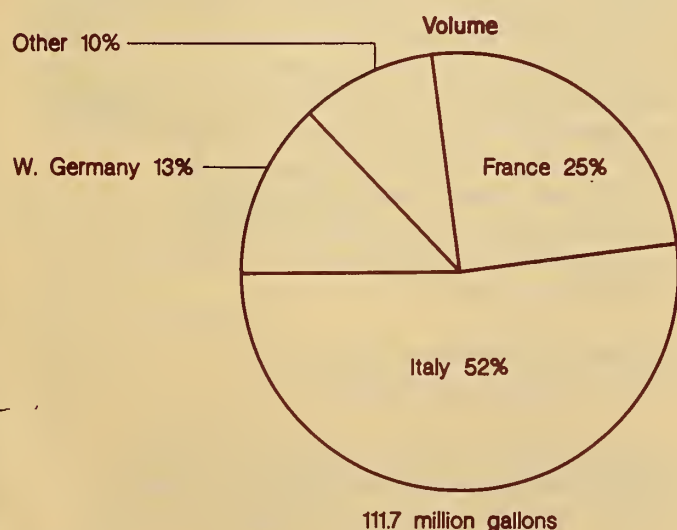
The French share of total U.S. imports has risen sharply during the 1980's (see table 1). In 1980, France accounted for 13 percent of the total volume of still wine imports. By 1985, the proportion had risen to 25 percent. French wines are a highly differentiated product, spanning the range from prestigious and highly priced appellation wines, such as those from Bordeaux and Burgundy, to relatively inexpensive non-appellation wines. 2/

To examine the determinants of French imports, a series of per capita import equations was estimated for four categories of wine: Bordeaux, Burgundy, appellation wine from other regions (other AOC), and non-appellation table wine (non-AOC). Annual information on export volume and values for 1960-1984 was obtained from French customs data.

Variables included in the equations were the price (unit value) of imports in dollars, deflated by the U.S. Consumer Price Index, and real per capita disposable income (CEA).

2/ Appellation wines denote those produced under specified conditions as to region of origin, variety of grape, maximum permissible yield per hectare, minimum alcoholic content, and cultural methods. Non-appellation wines are everyday table wines and wines not grown in renowned vineyard regions.

Figure 3
U.S. Table Wine Import Shares, 1985



In all cases the equations explain a large proportion (more than 90 percent) of variation in imports (see appendix table A1).

Using these equations, the response of imports to changes in import price and income can be estimated. Table 3 gives the percentage change in imports associated with a 1-percent change in price or income, for the period as a whole and for the 3 most recent years (1982-84) used in estimating the equations.

Changes in the real price of wine and in consumer disposable income are both important in affecting the amount of wine

Table 3.--Percentage change in per capita imports resulting from a 1-percent increase in real price and real income

Type of wine	Whole period average 1/		1982-84 average	
	Price	Income	Price	Income
French				
Bordeaux	-.96	3.06	-.39	1.97
Burgundy	-1.27	2.75	-.80	2.12
Other AOC	-1.53	.99	-.78	.70
Non-appellation	-4.69	8.14	-1.67	3.61
Italian				
Inexpensive (Less than \$4 per gallon)	-3.08	0	-.69	0
Expensive (More than \$4 per gallon)	-2.64	3.98	-2.64	3.98

1/ 1960-84 for French, except non-appellation which is 1967-84. 1967-84 for Italian.

Note: These figures relate to long-run response, after adjustment lags.

SOURCES: Hervouet and Blandford; Donadio, Blandford, and White.

imported. However, their effects have lessened recently. A reduction in real price generates an increase in per capita consumption of imported wine, as does an increase in real disposable income.

Bordeaux imports are the least affected by changes in price. In recent years (1982-84) each 1-percent decline in Bordeaux prices generated an increase of roughly .4 percent in consumption. Such wines have an extremely strong image in the marketplace. Consumers are willing to pay for these wines, whose consumption is strongly affected by increases in income. In recent years, each 1-percent rise in real consumer income generated an increase in per capita consumption of almost 2 percent.

Burgundy imports are also sensitive to income growth, but are slightly more responsive to price changes than Bordeaux wines. The other AOC category (comprised largely of wines with the appellations of Alsace, Anjou, Cotes de Rhone, Cotes du Provence, and Muscadet) is about as responsive to price changes as Burgundy wines, but less responsive to income growth.

The large price and income response of non-appellation wine reflects the rapid growth this category has experienced since 1970 (see table 3). Non-appellation wine appears to have benefited because it has the image of quality and product characteristics associated with French wines in general, but is far less expensive than its appellation counterparts.

Determinants of Italian Imports

U.S. imports of Italian wines are generally less diverse than French wine imports. In 1985, 53 percent of Italian imports were made up of inexpensive wines of the Lambrusco type (IFCI). These slightly carbonated sweet wines are popular with new wine drinkers and with those who consume wine as an alternative to beer or liquor rather than as a complement to food. U.S. customs data on wine imports distinguish between inexpensive wines, with a customs value of less than \$4 per gallon, and more expensive wines of more than \$4 per gallon. In the case of Italian wines, this provides a reasonably good breakdown of imports into appellation and non-appellation categories.

Import equations similar to those for French wines were estimated for Italian wines. Quarterly statistics on volume and total value spanning the period 1967 through 1985 were employed. As with French imports, variations in real prices (unit import value) and incomes explain most of the variation in per capita imports (95 percent or more). The percentage response of imports to a 1-percent change in price or income is given in Table 3.

In the case of cheaper Italian wines, price change is the principal factor determining per capita consumption. Furthermore, as imports have grown, the response to price change has declined. In recent years each 1-percent decline in price has led to an increase in per capita consumption of only .7 percent.

The low price response, coupled with the lack of income response, suggests that a saturation point has been reached for Italian imports of low-cost wines in the U.S. market, a view borne out by recent developments. Since 1981, total imports of this category of wine have remained stable, between 45 and 47 million gallons. These wines appear to be suffering the most from competition with wine coolers and other beverages.

The situation with more expensive Italian imports is significantly different. These imports are highly responsive to both price and income in the longer term. A 1-percent decline in price results in a 2.6-percent increase in consumption, while a 1-percent growth in consumer income results in an almost 4-percent increase in consumption. This relationship is similar to that for appellation French wines. Italian wines' greater consumer sensitivity to price probably reflects the fact that Italian appellation wines are generally less well-known to U.S. consumers than French Bordeaux or Burgundy, and have less "brand" loyalty. Because of their weaker marketing image, Italian appellation wines have consumption characteristics more similar to French non-appellation wines than to French appellation wines.

Effects of Exchange Rates and Income Growth on Imports

As indicated above, the U.S. wine market's depressed state during the early 1980's was not reflected in imports. One of

the major factors contributing to sustained import growth was the substantial appreciation of the dollar against other major currencies. Between 1980 and 1985, the value of the dollar on a trade-weighted basis increased by more than 55 percent (CEA). This lowered the cost of many imported goods and increased their competitiveness with respect to domestic products.

Wine was no exception. Real prices of imported wine have declined even further because wine prices did not rise along with prices of other goods and services. The average unit value (in current dollars) of all imported wine remained virtually constant from 1980 to 1985. However, after adjusting for inflation, the real price of imports declined by just over 30 percent.

The estimated import equations were used to determine the impact of the dollar appreciation on the volume of French and Italian imports. Import volumes predicted by the equations, with the exchange rate fixed at the 1979 level (annual average in the French case, first-quarter average in the Italian case), were compared to those predicted with

the actual exchange rate. The annual average difference is summarized in Table 4. The additional change in imports due to consumer income growth was calculated by fixing both income and the exchange rate at the 1979 level. These results are also included in Table 4.

Appreciation of the dollar against the French franc and Italian lira had a major effect on import volume for all categories of French and Italian wine. The dollar's appreciation accounted for between 63 and 100 percent of the increase in imports over the period.^{3/} In terms of the total change in imports, the effect was strongest in cases where consumer response to price changes was greatest. For example, the high price sensitivity of non-appellation French wines meant their imports were affected strongly by the franc's decline. The reduction in real price generated by the strong dollar had a

^{3/} Variables other than price and income may also have contributed to import growth, and if included in the import equation, may have resulted in dollar appreciation accounting for less of the increase.

Table 4.—Increase in U.S. imports of French and Italian wines during the early 1980's

	Overall increase	Increase due to currency change	Increase due to income growth	Proportion of total due to currency change
	Percent			
<u>French (1980-84)</u>				
Bordeaux	32	20	12	63
Burgundy	51	38	13	75
Other AOC	68	64	4	94
Non-appellation	71	54	17	76
<u>Italian (Feb. 1979-Apr. 1984)</u>				
Inexpensive				
(Less than \$4/gallon)	19	19	0	100
Expensive				
(More than \$4/gallon)	34	31	3	91

SOURCES: Hervouet and Blandford; Donadio.

much greater impact upon consumption. Growth in the market share of imports, while not totally due to the strong dollar, was substantially generated by the strength of U.S. currency overseas.

Outlook for the Future

This analysis has important implications for U.S. grape and wine producers. It demonstrates that for many wine categories, U.S. consumers are responsive to prices of imported wines. In addition, consumers' consumption of imported wine rises along with disposable incomes. The lowest price sensitivity is shown by two markedly different types—the most expensive, well-known, and perhaps most sophisticated wines represented by French Bordeaux, and the least sophisticated and cheapest Italian Lambrusco-type.

In the case of Bordeaux wines, this lack of sensitivity is an asset, particularly since price-insensitive consumers increase their consumption of this type as their incomes grow. In the case of Lambrusco wines, market saturation appears to have been reached, and there is probably little opportunity for a further substantial increase in per capita demand in the United States.

Generally, imported wines with the greatest "brand" identification, such as Bordeaux and Burgundy, have the lowest consumer sensitivity to price and the highest sensitivity to changes in disposable income. Other wines, such as the more expensive Italian imports and non-appellation French imports, both of which are less well-known and have less consumer loyalty, are also responsive to income changes but far more sensitive to price changes.

The importance of the dollar's appreciation during the early 1980's suggests that import growth will decline over the next few years if the dollar remains at its current lower level or falls further. The dollar's value has declined against most European currencies since its peak in early 1985. On a trade-weighted basis, the decline is more than

30 percent. The dollar's fall has made imports more expensive. Through August 1986, imports of all wine were 17 percent lower in volume than for the first 8 months of 1985. The volume was probably also affected by consumer concerns about methanol contamination. Wine imports from Italy, in particular, fell 23 percent.

Even with a weaker dollar, competition in the U.S. market from French and Italian wines is likely to remain strong, and further significant growth in imports, particularly from France, may be expected if real consumer income in the United States continues to increase. European suppliers, faced with stagnant or declining consumption at home, will inevitably look to the U.S. market as a source of growth. Both France and Italy place a high priority on promotion in the U.S. market. Public and private organizations in both countries are actively trying to protect national market share and to increase the visibility of their countries' products in the United States.

Unless there is a major development in the U.S. market, growth in per capita wine consumption appears unlikely to return to the high rates of the 1970's. With continued competition from imports, U.S. grape producers are unlikely to again enjoy the benefit of the 1970's relatively high grape prices.

On the other hand, growth in other uses of multipurpose grapes, such as for raisins and table grapes in California, and continuation of California's Raisin Diversion Program could help maintain growers' grape prices. Increasingly, cost containment and successful marketing will be the keys to profitability.

There is a range of tastes in the U.S. wine market, extending from the popular and inexpensive wine or wine-beverages to the traditional varietal or appellation segment of the market. These all provide opportunities for domestic suppliers. In vying for the consumer's dollar, price, quality, and visibility in the marketplace will be important determinants of future success for the domestic wine/grape industry.

REFERENCES

- (1) Council of Economic Advisors. *Economic Report of the President*. Washington, D.C. Various years.
- (2) Donadio, N. *The Italian Wine Industry and U.S. Wine Imports*. M.S. Thesis, Department of Agricultural Economics, Cornell University, Ithaca, New York. January 1987. 227 pp.
- (3) Donadio N., D. Blandford and G. B. White. "The Determinants of Italian Wine Imports in the United States Wine Market." Paper presented at the XXII International Horticultural Congress, Davis, California, August 10-18, 1986.
- (4) Foreign Agricultural Service. *Horticultural Products*. Foreign Agricultural Circular, U.S. Department of Agriculture, Washington, D.C. March 1986.
- (5) Hervouet, V. and D. Blandford. "Determinants of the Volume and Structure of U.S. Still Wine Imports from France." Paper presented at the XXII International Horticultural Congress, Davis, California, August 10-18, 1986.
- (6) Italian Foreign Commerce Institute. *Wine Bureau Publication*. New York.
- (7) National Agricultural Statistics Service. *Noncitrus Fruits and Nuts Annual Summary*. U.S. Department of Agriculture, Washington, D.C. Various issues.

Table A1.—Estimated import equations

Form	Variables										Statistics		
	Constant	M _{t-1}	P _t	P _{t-1}	P _{t-2}	P _{t-4}	Y	D1	D2	D3	R ²	DW	DH
French (1980-84)													
Bordeaux	Linear	-0.051 (-4.7)			-0.029 (-5.86)		0.037 (19.7)				.95	1.28	
Burgundy	Linear	-0.017 (-3.6)		-0.004 (-1.4)	-0.021 (-7.1)		0.025 (15.8)				.93	1.97	
Other AOC	Linear	0.035 (1.5)	0.793 (5.4)		-0.065 (-4.1)		0.011 (2.2)				.91		.78
Non-appellation	Linear	-0.142 (-2.9)		-0.193 (-6.1)		-0.183 (-4.5)	-0.154 (-2.8)	0.109 (12.4)			.97	2.03	
Italian (1979.2-1984.4)													
Inexpensive (\$4/gallon)	Linear	0.030 (4.2)	0.652 (7.6)		-0.013 (-4.1)						.96		.23
Expensive (\$4/gallon)	Double log	-3.477 (-2.3)	0.522 (5.0)		-1.260 (-3.4)		1.897 (1.7)	0.393 (3.6)	0.375 (3.8)	0.422 (4.4)	.95		.02

Notes: Dependent variable is per capita imports (M) in liters for French; gallons for Italian.
P = import price in dollars deflated by the U.S. Consumer Price Index (1967=100).
Y = real per capita disposable income (1972 dollars).
D1, D2, D3 = seasonal dummy variables.
Estimation period is 1960-84 for French (annual data) except for non-appellation, which is 1970-84, and 1967-84 for Italian (quarterly data). All equations estimated by ordinary least squares.
Numbers in parenthesis are t values.

SOURCES: Hervouet and Blandford; Danadio, Blandford, and White.

LIST OF TABLES

Page	Table	
4	1	Index of annual and quarterly prices received by growers for fresh and processing fruit, 1984-87.
4	2	Annual and quarterly consumer price indexes for fresh fruit, 1984-87.
6	3	Citrus fruit: Production, 1984/85, 1985/86, and indicated 1986/87.
8	4	Oranges used for frozen concentrate, Florida, 1983/84-1986/87.
11	5	Grapefruit used for frozen concentrate, Florida, 1983/84-1986/87.
13	6	Bearing acreage, fruits and tree nuts, United States, 1979-86.
14	7	Apples, fresh cold storage holdings at end of the month 1984-86.
15	8	Fresh banana imports by country or origin, United States, 1983-86.
17	9	Pears: Utilized production by States and Pacific Coast, variety composition, 1984-86.
17	10	Pears, fresh cold storage holdings at end of the month, 1984-86.
19	11	Stocks of frozen fruit: End of January, 1984-87.
20	12	Strawberry imports, United States, 1980-86.
33-34	13	Production and utilization of specified noncitrus fruit, United States, 1984-86.
35	14	Fruit and edible tree nuts: Season-average prices per unit received by growers, 1985 and 1986.
36	15	Fruit for processing: Season-average price per ton received by growers for selected noncitrus fruit, by type of use, principal States, 1984-86.
37	16	Fresh fruit: Consumer price indexes, United States, by months, 1984-87.
38	17	Producer price indexes for selected canned fruit and juices, United States, by months, 1985-87.
39	18	Frozen concentrated citrus juices: Stocks, packs, supplies, and movements, Florida, 1983/84-1986/87.
40	19	Selected fresh citrus prices, f.o.b., packed fresh, by months, 1985-87.
41	20	Citrus fruit: Exports of selected fresh items, by areas of destination, United States, 1983/84-1986/87.
42	21	Apples, commercial crop: Total production and season-average prices received by growers, 1984, 1985, and indicated 1986.
43	22	Canned noncitrus fruit: Cannery stocks, packs, supplies, and shipments, 1984/85-1986/87.
44	23	Fresh fruit: Retail price, marketing margin, and grower-packer return, sold in Baltimore, indicated months, 1985-86.
45	24	Fresh fruit: 1986 representative truck rates for selected fruits.
46	25	Monthly average price indexes for fruits, United States, 1986-87.
47	26	Monthly average fruit prices received by growers, United States, 1986-87.

Table 13.—Production and utilization of specified noncitrus fruit, United States, 1984-86

Commodity and year	Production		Utilization 1/							Total processed 2/	
	Total	Utilized 2/	Fresh	Canned	Frozen	Brined	Processed (fresh equivalent)				
							Wine	Juice	Oil		Dried
1,000 short tons											
Apricots:											
1984	127.2	117.1	15.8	66.8	11.5	—	—	—	22.5	—	101.3
1985	131.5	106.3	20.0	61.0	12.0	—	—	—	13.0	—	86.4
1986 9/.....	55.0	54.9	10.7	27.0	7.2	—	—	—	9.5	—	44.3
Bananas:											
1984	4.5	4.5	4.5	—	—	—	—	—	—	—	—
1985	4.1	4.1	4.1	—	—	—	—	—	—	—	—
1986	4.5	4.5	4.5	—	—	—	—	—	—	—	—
Cherries, sweet:											
1984	181.8	164.3	90.5	9.4	—	50.5	—	—	—	13.9	73.8
1985	132.5	126.5	53.0	11.3	—	51.4	—	—	—	10.8	73.5
1986	137.7	136.8	68.6	7.4	—	50.2	—	—	—	10.5	68.1
Cherries, tart:											
1984	135.8	128.0	4.0	36.8	83.3	—	—	—	—	3.9	124.0
1985	143.1	140.1	3.8	30.5	103.4	—	—	—	—	2.5	136.3
1986	112.1	109.2	2.8	22.0	79.8	—	—	—	—	4.8	106.5
Dates:											
1984	22.2	22.2	22.2	—	—	—	—	—	—	—	—
1985	29.0	29.0	29.0	—	—	—	—	—	—	—	—
1986	17.6	17.6	17.6	—	—	—	—	—	—	—	—
Figs:											
1984	36.5	36.5	5/2.0	—	—	—	—	—	34.5	—	34.5
1985	38.0	38.0	(9)	—	—	—	—	—	36.6	—	(9)
1986	34.4	34.4	(9)	—	—	—	—	—	33.0	—	(9)
Grapes:											
1984	5,193.9	5,169.8	676.9	30.0	—	—	2,693.2	—	1,392.5	—	4,491.9
1985	5,651.7	5,651.6	781.1	45.0	—	—	2,919.3	—	1,610.7	—	4,870.5
1986	5,595.9	5,595.3	732.9	40.0	—	—	2,934.5	—	1,577.7	—	4,862.4
Kiwifruit:											
1984	18.0	16.6	16.6	—	—	—	—	—	—	—	—
1985	22.0	20.6	20.5	—	—	—	—	—	—	—	—
1986	23.5	21.0	21.0	—	—	—	—	—	—	—	—
Nectarines:											
1984	183.0	183.0	182.8	—	—	—	—	—	—	—	.2
1985	210.0	210.0	208.0	—	—	—	—	—	—	—	2.0
1986	172.0	172.0	170.0	—	—	—	—	—	—	—	2.0

Continued—

Table 14.—Fruit and edible tree nuts: Season-average prices per unit received by growers, 1985 and 1986

Commodity	Unit	1985			1986 1/		
		Fresh	Processed	All	Fresh	Processed	All
Dollars							
NONCITRUS: 2/							
Apples, commercial	Lb.	0.173	6/103.00	0.117	(7)	(7)	0.131
Apricots, 3 States	Ton	482.00	210.00	265.00	949.00	269.00	416.00
Avocados 3/	Ton	936.00	—	936.00	(7)	—	(7)
Avocados, California 3/	Ton	1,000.00	—	1,000.00	(7)	—	(7)
Bananas, Hawaii	Lb.	.303	—	.303	.300	—	.300
Cherries, sweet	Ton	1,192.00	515.00	799.00	1,094.00	553.00	825.00
Cherries, tart	Lb.	.334	.221	.224	.323	.227	.229
Cranberries	Bbl.	—	—	54.50	—	—	(7)
Dates, California	Ton	866.00	—	866.00	751.00	—	751.00
Figs, California	Ton	—	—	318.00	—	—	(7)
Grapes	Ton	292.00	152.00	171.00	463.00	173.00	211.00
Grapes, California	Ton	273.00	151.00	169.00	441.00	169.00	206.00
Kiwifruit, California	Ton	813.00	—	813.00	(6)	—	(6)
Nectarines, California	Ton	330.00	41.50	327.00	445.00	35.00	440.00
Olives, California	Ton	500.00	559.00	559.00	500.00	480.00	480.00
Papayas, Hawaii	Lb.	.169	.023	.142	.210	.020	.178
Peaches	Lb.	.206	6/ 209.00	.150	.198	6/ 188.00	.146
Pears	Ton	349.00	9/ 200.00	269.00	393.00	9/ 169.00	280.00
Pineapples, Hawaii	Ton	410.00	90.00	160.00	416.00	89.00	156.00
Plums, California	Ton	(10)	(10)	514.00	(10)	(10)	657.00
Pomegranates, California	Ton	(10)	(10)	318.00	(10)	(10)	400.00
Prunes, California	Ton	—	680.00	680.00	—	(7)	(7)
Prunes and plums, other States	Ton	329.00	148.00	230.00	432.00	105.00	258.00
Strawberries	Lb.	.526	.204	.443	.576	.284	.494
CITRUS: 4/							
Oranges	Box	11.82	8.02	9.19	8.08	5.19	6.09
Tangerines	Box	18.78	4.13	14.41	18.27	1.74	13.24
Grapefruit	Box	7.89	3.85	5.53	7.47	4.31	5.80
Lemons	Box	12.54	1.48	6.51	18.29	1.19	11.89
Limes	Box	17.40	3.36	12.13	21.70	3.37	14.49
Tangelos	Box	12.80	7.30	9.54	8.80	4.49	6.44
Temple	Box	12.30	7.06	8.07	8.30	4.09	5.39
TREE NUTS:							
Almonds, California 5/	Lb.	—	—	.680	—	—	2.200
Filberts, 2 States	Ton	—	—	680.00	—	—	738.00
Macadamia nuts, Hawaii	Lb.	—	—	.725	—	—	.800
Pistachios	Lb.	—	—	1.350	—	—	1.190
Pecans, all	Lb.	—	—	.680	—	—	.848
Improved	Lb.	—	—	.791	—	—	.928
Native and seedling	Lb.	—	—	.497	—	—	.630
Walnuts, 2 States	Ton	—	—	798.00	—	—	(7)

1/ Preliminary. 2/ Fresh fruit prices are equivalent returns at packinghouse door for Washington and Oregon, equivalent first delivery point returns for California, and prices as sold for other States. Processing fruit prices for all States are equivalent returns at processing plant door. 3/ 1985, indicated 1985/86. 4/ Equivalent packinghouse door 1985, indicated 1984/85. 5/ Shelled basis. 6/ Dollars per ton. 7/ Data available July 8, 1987. 8/ Data available August 18, 1987. 9/ Excludes dried pears. 10/ Missing data not published to avoid disclosure of individual operations.

SOURCES: Noncitrus Fruits and Nuts Annual, Agricultural Prices, and Vegetables, NASS, USDA.

Table 15.—Fruit for processing: Season-average price per ton received by growers for selected noncitrus fruit, by type of use, principal States, 1984-86 1/

Fruit, use, and States	1984	1985	1986	Fruit, use, and States	1984	1985	1986
Apricots:							
Canning:							
California	280.00	215.00	263.00	California (Cont'd):			
Freezing:				Dried (fresh basis)	153.00	136.00	161.00
California	296.00	191.00	307.00	Wine	202.00	185.00	195.00
Drying:				Peaches, clingstone:			
California (fresh basis) ..	274.00	235.00	270.00	Canning:			
Cherries, tart:				California	201.00	221.00	197.00
Processing, all				Peaches, freestone:			
New York	442.00	504.00	452.00	Canning:			
Pennsylvania	480.00	480.00	460.00	California	216.00	232.00	(4)
Michigan	496.00	434.00	466.00	Freezing:			
Wisconsin	466.00	388.00	402.00	California	148.00	149.00	165.00
Cherries, sweet:				Drying:			
Processing, all				California (fresh basis)	100.00	104.00	96.00
New York	360.00	(4)	(4)				
Michigan	373.00	473.00	520.00	Pears, Bartlett:			
Washington	283.00	506.00	498.00	Canning:			
Canning:				Washington	178.00	187.00	162.00
Washington	527.00	714.00	575.00	California	182.00	232.00	190.00
Oregon	667.00	742.00	580.00	Drying:			
Michigan	398.00	474.00	590.00	California (fresh basis)	117.00	136.00	(4)
Brining:				Prunes and plums:			
Washington	245.00	534.00	471.00	Canning:			
Michigan	366.00	478.00	496.00	Michigan	203.00	238.00	115.00
Figs—California				Prunes:			
All processing	279.00	300.00	(4)	Drying (fresh basis)			
Grapes—California 2/				California	231.00	223.00	(3)
All processing	164.00	151.00	169.00				

1/ Prices are basis bulk fruit at first delivery point for all California fruits except prunes and pears for drying and processed grapes. Prices for California prunes and pears for drying and grapes and for fruits in other States are equivalent processing plant door returns. 2/ All grape varieties used for processing and wine; raisin varieties for dried (fresh basis). 3/ To be published July 8, 1987. 4/ Missing data not published to avoid disclosure of individual operations.

SOURCE: Noncitrus Fruits and Nuts Annual, NASS, USDA.

Table 16.—Fresh fruit: Consumer price indexes, United States, by months, 1984-87

Item and year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
(1967=100)												
Apples: (pound)												
1984	277.0	287.9	298.6	299.3	298.8	315.5	329.9	341.8	337.9	298.0	302.8	297.5
1985	304.1	318.5	321.4	328.8	333.9	342.7	347.9	343.2	324.9	307.5	316.8	320.4
1986	333.2	347.2	348.3	353.8	374.3	403.1	420.5	483.9	437.5	343.8	352.7	336.7
1987	356.5											
Bananas: (pound)												
1984	244.3	263.2	264.1	275.2	251.1	277.9	271.8	257.0	249.9	242.1	234.9	225.9
1985	248.6	268.9	281.6	301.2	277.0	285.7	249.1	257.2	260.0	242.0	222.0	226.5
1986	240.1	268.1	287.1	327.3	327.4	264.2	262.8	260.4	272.2	266.1	263.5	238.7
1987	262.3											
Oranges: (dozen)												
1984	301.3	303.0	309.6	309.5	344.8	452.5	486.5	530.8	553.6	538.4	473.6	428.0
1985	429.7	448.6	437.4	444.3	484.8	473.1	474.7	481.1	462.9	433.2	399.7	388.2
1986	387.0	373.9	367.4	377.2	393.4	410.3	426.9	429.5	418.8	431.3	430.2	411.5
1987	425.4											

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

Table 17.—Producer price indexes for selected canned fruit and juices, United States, by months, 1985-87

Item and year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
(1967=100)												
CANNED FRUIT:												
Applesauce												
(No. 303 can)												
1985	268.0	266.5	266.3	265.1	263.9	264.0	260.3	264.4	263.9	260.7	262.1	258.8
1986	260.6	260.6	262.7	262.3	263.5	264.2	263.4	263.5	262.6	266.0	265.0	265.0
1987	269.6											
Peaches												
(No. 2 1/2 can)												
1985	333.3	322.1	336.6	329.0	325.7	338.8	340.3	339.3	325.6	328.1	315.3	315.3
1986	324.1	324.1	335.4	325.1	325.1	336.4	327.6	309.6	309.6	N.P.	337.2	N.P.
1987	349.3											
Pears												
(No. 2 1/2 can)												
1985	262.3	262.3	262.3	262.3	262.3	262.3	267.5	267.5	267.5	267.5	253.8	253.8
1986	253.8	N.P.	247.8	250.8	250.8	250.8	235.8	N.P.	N.P.	N.P.	N.P.	N.P.
1987	N.P.											
CANNED JUICE:												
Apple												
(32 oz. bottle)												
1985	368.3	368.3	368.3	368.3	368.3	369.9	369.9	369.9	367.0	367.0	367.0	369.9
1986	377.0	369.9	367.0	367.0	367.0	367.0	373.4	373.7	373.7	374.6	374.6	374.9
1987	378.3											
Pineapple												
(No. 3 can)												
1985	529.1	539.5	539.5	539.5	539.5	539.5	554.9	554.9	554.9	554.9	554.9	554.9
1986	554.9	554.9	554.9	554.9	554.9	554.9	554.9	554.9	554.9	554.9	554.9	554.9
1987	554.9											
Grapefruit												
(No. 3 can)												
1985	374.1	382.5	382.5	382.5	382.5	382.5	382.5	386.0	386.0	386.0	386.0	386.0
1986	386.0	386.0	386.0	386.0	N.P.	N.P.	N.P.	N.P.	N.P.	N.P.	N.P.	N.P.
1987	400.0											400.0

N.P. = Not published.

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

Table 18.—Frozen concentrated citrus juices: Stocks, packs, supplies, and movements, Florida, 1983/84-1986/87

Item and season	Carryin	Pack	Total supply	Total season movements	Carryout
Million gallons 1/					
Orange:					
1983/84	42.8	239.9	282.7	228.3	54.4
1984/85	54.4	209.6	264.0	215.7	48.3
1985/86	48.3	215.1	263.4	226.7	36.7
1986/87	36.7				
Grapefruit:					
1983/84	5.4	20.2	25.6	21.6	4.0
1984/85	4.0	25.3	29.3	26.0	3.4
1985/86	3.4	26.2	29.6	26.2	3.4
1986/87	3.4				
Tangerine:					
1983/84	.1	.8	.9	.6	.3
1984/85	.3	.8	1.1	.5	.6
1985/86	.6	1.0	1.6	1.3	.3
1986/87	.3				

1/ Oranges and tangerines - 42 degree Brix and Grapefruit - 40 degree Brix.

SOURCE: Florida Citrus Processors Association.

Table 19.--Selected fresh citrus prices, f.o.b., pecked fresh, by months, 1985-87

Item and year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Dollars per box												
ORANGES:												
Florida												
1985	17.00	19.50	16.00	15.60	15.50	15.80	--	--	--	--	13.20	14.20
1986	11.30	11.11	10.55	10.10	10.00	13.50	--	--	--	--	13.40	13.10
1987	11.00	11.30										
Arizona												
1985	17.40	18.10	15.10	15.30	16.20	13.40	11.70	--	--	22.30	18.10	16.10
1986	13.60	12.90	13.60	13.10	12.20	10.80	8.50	--	--	--	17.60	15.20
1987	14.40	9.15										
California												
1985	18.70	17.50	16.20	17.00	17.40	16.50	15.90	15.40	15.00	13.70	15.60	16.20
1986	15.10	13.70	13.80	12.90	13.10	12.10	12.10	12.40	12.90	12.60	16.30	15.00
1987	14.40	13.90										
GRAPEFRUIT:												
Florida												
1985	11.30	12.40	11.40	11.40	12.00	--	--	--	--	12.00	11.00	11.00
1986	10.90	11.20	11.80	12.30	12.80	--	--	--	--	13.60	11.10	12.10
1987	11.70	11.40										
California												
1985	14.80	14.00	12.10	12.80	14.20	14.40	15.10	14.80	15.10	14.40	17.40	16.30
1986	16.10	14.90	14.20	11.80	14.30	15.60	14.90	15.00	15.00	16.70	16.30	12.40
1987	12.30	11.60										
LEMONS:												
Arizona												
1985	16.50	17.80	17.90	15.80	--	--	--	--	48.60	51.50	27.00	22.70
1986	20.80	16.10	12.80	12.80	12.80	12.80	--	--	14.80	15.70	18.90	18.50
1987	19.20	19.60										
California												
1985	16.10	15.20	15.60	16.40	19.70	24.20	30.50	44.00	46.00	37.20	26.70	23.00
1986	22.00	18.60	17.70	18.60	18.20	22.90	24.20	24.60	16.60	15.80	15.80	16.90
1987	16.00	15.30										

SOURCE: Agricultural Prices, MASS, USDA.

Table 20.—Citrus fruit: Exports of selected fresh items, by areas of destination, United States, 1983/84–1986/87

Item and season 1/	Europe							Total	
	Canada	France	Netherlands	Other EC 2/	Other	Hong Kong	Japan		Other
1,000 metric tons									
Fresh fruit									
Oranges:									
1983/84	130	—	—	1	—	101	83	53	368
1984/85	125	—	—	9	—	113	111	49	407
1985/86	112	—	—	7	1	126	109	39	394
1985/86 thru Dec.	18	—	—	—	—	13	5	5	41
1986/87 thru Dec.	23	—	—	1	—	15	8	3	50
Grapefruit:									
1983/84	41	40	19	8	3	1	147	3	262
1984/85	35	32	14	6	1	—	103	8	199
1985/86	27	45	20	14	3	—	152	9	270
1985/86 thru Dec.	9	13	6	5	1	—	22	1	57
1986/87 thru Dec.	9	15	9	6	1	—	26	3	69
Lemons:									
1983/84	12	3	3	1	2	6	120	6	153
1984/85	12	4	4	2	1	6	115	5	149
1985/86	9	—	—	1	1	—	111	8	130
1985/86 thru Dec.	3	—	—	—	—	—	39	2	44
1986/87 thru Dec.	4	—	—	2	—	—	51	3	60

1/ Season beginning August 1 for lemons, September 1 for grapefruit, and November 1 for oranges. 2/ Belgium-Luxembourg, Denmark, West Germany, Italy, Ireland, Greece, and the United Kingdom.

SOURCE: Foreign Agricultural Service, USDA.

Table 21.—Apples, commercial crop 1/: Total production and season-average prices received by growers, 1984, 1985, and indicated 1986

State and area	Production 2/			Price per pound		
	1984	1985	1986	1984	1985	1986
	Million pounds			Cents		
Eastern States:						
Maine	70.0	85.0	84.0	18.1	16.3	19.2
New Hampshire	50.0	56.0	50.0	18.6	18.6	20.6
Vermont	41.0	49.0	49.0	14.5	16.5	19.4
Massachusetts	97.0	89.0	95.0	18.6	18.3	20.6
Rhode Island	5.0	4.0	5.0	20.3	21.8	24.0
Connecticut	47.0	42.0	46.0	16.4	16.6	19.5
New York	1,020.0	1,090.0	950.0	11.2	7.0	9.3
New Jersey	110.0	105.0	100.0	12.7	11.8	14.9
Pennsylvania	575.0	585.0	620.0	9.2	9.4	8.6
Delaware	24.0	19.0	21.0	9.2	8.7	8.1
Maryland	80.0	80.0	85.0	11.4	10.2	12.1
Virginia	465.0	395.0	480.0	9.7	9.8	12.9
West Virginia	225.0	230.0	235.0	10.6	9.8	15.7
North Carolina	360.0	275.0	100.0	6.6	7.4	12.7
South Carolina	45.0	16.0	30.0	12.2	11.0	12.7
Georgia	50.0	20.0	30.0	8.4	11.2	14.7
Total	3,264.0	3,140.0	2,980.0			
Central States:						
Ohio	135.0	145.0	90.0	16.1	14.4	17.6
Indiana	64.0	75.0	37.0	13.1	13.1	21.5
Illinois	90.0	106.0	90.0	15.2	12.2	16.0
Michigan	770.0	1,100.0	700.0	8.0	7.4	9.7
Wisconsin	53.0	60.0	56.0	22.0	14.0	15.5
Minnesota	15.0	23.0	19.0	23.5	22.0	24.7
Iowa	5.0	13.5	5.5	19.3	15.4	26.8
Missouri	40.0	62.0	37.0	16.9	16.2	19.1
Kansas	5.0	15.0	4.0	16.5	11.6	23.0
Kentucky	18.0	17.0	4.0	13.3	14.1	20.8
Tennessee	13.0	11.0	9.0	16.1	13.6	17.9
Arkansas	8.0	16.0	10.0	13.7	11.6	13.3
Total	1,216.0	1,643.5	1,061.5			
Western States:						
Idaho	135.0	131.0	95.0	18.3	19.6	25.1
Colorado	65.0	110.0	18.0	11.1	9.5	12.5
New Mexico	8.0	10.0	6.0	17.5	12.8	19.0
Utah	45.0	57.0	34.0	10.3	12.1	14.6
Washington	2,950.0	2,050.0	3,100.0	11.1	17.0	13.7
Oregon	130.0	160.0	120.0	10.1	12.6	11.4
California	520.0	620.0	500.0	13.1	9.4	15.1
Total	3,853.0	3,138.0	3,873.0			
United States	8,333.0	7,921.5	7,914.5	11.2	11.7	13.1

1/ In orchards of 100 or more bearing trees. 2/ Includes unharvested production and harvested not sold. In the United States, this was 14.9 million pounds in 1984, 87.7 in 1985, and 41.7 in 1986.

SOURCE: Noncitrus Fruits and Nuts, NASS, USDA.

Table 22.--Canned noncitrus fruit: Cannery stocks, packs, supplies, and shipments, 1984/85-1986/87

Item and season 1/	Carryin	Pack	Total supply	Shipments to Dec. 1	Dec. 1 stocks	Total season shipments	Carryout
1,000 equivalent cases 24 No. 2 1/2's							
Total:							
1984/85	5,037	39,336	44,373	19,364	25,051	35,621	8,709
1985/86	8,709	39,523	48,232	16,621	31,611	35,163	13,069
1986/87	13,069	33,794	46,863	20,534	26,329		
Apricots 2/:							
1984/85	123	1,861	1,984	873	1,111	1,440	544
1985/86	544	1,532	2,076	985	1,091	1,712	364
1986/87	364	505	869	611	258		
Fruit cocktail 2/:							
1984/85	1,899	8,795	10,694	4,831	5,863	8,992	1,658
1985/86	1,658	10,007	11,665	4,092	7,573	8,692	2,973
1986/87	2,973	8,939	11,912	4,658	7,254		
Fruits for salad and mixed 2/:							
1984/85	312	2,336	2,648	984	1,664	1,978	671
1985/86	671	2,459	3,130	918	2,149	2,064	1,066
1986/87	1,066	1,817	2,883	1,033	1,850		
Peaches, clingstone 2/:							
1984/85	1,140	18,687	19,827	8,384	11,485	15,636	4,191
1985/86	4,191	17,712	21,903	7,411	14,492	16,255	5,648
1986/87	5,648	15,324	20,972	9,329	11,643		
Pears:							
1984/85	1,563	7,657	9,220	4,292	4,928	7,575	1,645
1985/86	1,645	7,813	9,458	3,152	6,306	6,440	3,018
1986/87	3,018	7,209	10,227	4,903	5,324		

1/ Season beginning June 1. 2/ California only.

SOURCES: California League of Food Processors and Northwest Food Processors Associations.

Table 23.—Fresh fruit: Retail price, marketing margin, and grower-packer return, sold in Baltimore, indicated months, 1985-1986

Commodity, production area and month	Retail price	Marketing margin		Grower-packer return 1/ (f.o.b. shipping point price)	
		Absolute	Percentage of retail price	Absolute	Percentage of retail price
		Cents		Cents	
Apples, Eastern Delicious, Appalachia: (pound)					
December 1985	36.3	12.2	33	24.1	67
December 1986	45.0	19.0	42	26.0	58
November 1986	47.3	20.1	42	27.2	58
Apples, Red Delicious, Washington State: (pound)					
December 1985	56.0	21.3	38	34.7	62
December 1986	89.0	60.5	68	28.5	32
November 1986	85.0	53.4	63	31.6	37
Grapefruit, Florida: (pound)					
December 1985	28.2	17.3	61	10.9	39
December 1986	32.9	19.6	60	13.3	40
November 1986	39.5	27.1	69	12.4	31
Lemons: California: (pound)					
December 1985	107.0	71.1	66	35.9	34
December 1986	86.2	60.9	71	25.3	29
November 1986	89.6	63.7	71	25.9	29
Oranges, Florida: (pound)					
December 1985	46.5	34.6	74	11.9	26
December 1986	38.3	26.8	70	11.5	30
November 1986	35.9	22.0	61	13.9	39
Oranges, Valencia, California: (pound)					
November 1985	48.4	32.5	67	15.9	33
November 1986	50.4	31.8	63	18.6	37
October 1986	46.7	29.3	63	17.4	37

1/ Adjusted to account for loss incurred during marketing due to waste and spoilage.

SOURCES: Maryland State Department of Agriculture, Baltimore Retail Food Price Report, Agricultural Marketing Service, USDA, the Lemon and Valencia Administrative Committees, and Citrus Administrative Committee.

Table 24.—Fresh fruit: 1986 representative truck rates for selected fruits 1/

Commodity, shipping point, and market	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Dollars per package												
Apples (Tray packed ctn.)												
Washington, Central to:												
Atlanta	2.80	2.80	2.80	2.80	2.80	2.80	2.80	2.80	—	2.80	2.80	3.20
Chicago	2.10	2.10	2.05	2.13	2.13	2.13	2.10	2.10	2.13	2.13	2.13	2.30
Dallas	—	—	—	2.28	2.28	2.28	2.33	2.33	2.33	2.33	2.33	2.38
Denver	1.50	1.50	1.50	1.55	1.55	1.55	1.55	1.55	1.55	1.55	1.55	1.60
Los Angeles	1.45	1.45	1.45	1.55	1.55	1.55	1.55	1.55	1.55	1.55	1.55	1.55
New York City	3.20	3.20	3.20	3.20	3.20	3.20	3.20	3.20	3.20	3.20	3.20	3.75
New York, Eastern to:												
Atlanta	1.03	1.03	1.03	1.03	1.03	—	—	—	—	—	1.25	1.25
New York City	.55	.55	.55	.55	.55	—	—	—	.58	.58	.58	.58
W. Virginia, Martinsburg, and Virginia, Winchester to:												
Atlanta	.93	.93	.93	.93	—	—	—	—	—	.95	.95	.95
New York City	.80	.80	.80	.80	—	—	—	—	—	.80	.80	.80
Grapefruit (4/5 bu. ctn.)												
Florida, Central District to:												
Atlanta	.59	.58	.58	.60	.69	.68	—	—	—	—	.58	.58
Chicago	1.25	1.20	1.18	1.33	1.55	1.50	—	—	—	—	1.12	1.28
New York City	1.25	1.22	1.18	1.33	1.55	1.50	—	—	—	—	1.15	1.23
Grapes (23 lb. lug)												
California, Kern District to:												
Atlanta	1.18	1.15	1.41	1.29	1.29	1.65	2.12	1.62	1.47	1.41	1.38	1.26
Chicago	1.15	1.15	1.29	1.26	1.26	1.56	2.15	1.53	1.32	1.21	1.18	1.21
Dallas	.85	.97	.97	.91	.97	1.18	1.53	1.09	1.09	.97	.94	.65
New York City	1.65	1.71	1.71	1.76	1.79	2.29	2.76	2.24	1.91	1.76	1.71	1.71
Citrus (7/10 bu. ctn.)												
California, Southern to:												
Atlanta	2.15	2.05	2.15	2.15	2.30	2.78	3.30	2.75	2.60	2.40	2.40	2.20
Chicago	1.90	2.00	1.95	2.00	2.15	2.40	3.10	2.50	2.20	2.08	2.05	1.90
Dallas	1.60	1.65	1.60	1.60	1.70	1.85	2.30	1.80	1.85	1.80	1.75	1.70
New York City	2.70	2.90	2.85	2.85	3.05	3.80	4.40	3.50	3.20	2.95	2.90	2.90
Oranges (4/5 bu. ctn.)												
Florida, Central District to:												
Atlanta	.61	.57	.57	.62	.72	.68	—	—	—	—	.58	.58
Chicago	1.32	1.20	1.17	1.32	1.55	1.53	—	—	—	—	1.13	1.27
New York City	1.35	1.25	1.17	1.32	1.55	1.53	—	—	—	—	1.15	1.23

1/ Reported from a sample of shippers and/or truck brokers in specified areas for shipments during the first week of each month.

SOURCE: Fruit and Vegetable Truck Rate Report, AMS,* USDA.

Table 25.--Monthly average price indexes for fruits, United States, 1986-87

Item	1986												1987	
	Annual	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.
								(1967=100)						
Producer price index:														
Fresh fruits	261.1	248.0	250.8	242.5	248.1	270.9	271.6	275.6	274.5	273.9	271.0	271.0	271.1	255.1
Citrus fruits	211.5	204.7	199.2	208.4	212.4	223.8	228.4	234.4	231.1	217.8	214.8	214.8	214.8	213.5
Other fruits	280.2	265.6	272.0	255.5	261.8	290.0	288.8	291.7	291.7	293.0	277.3	277.3	294.8	272.0
Dried fruits	377.4	371.1	369.3	372.9	371.1	371.6	374.0	377.4	381.5	377.9	383.8	383.8	384.8	383.6
Canned fruits and juices	315.1	314.6	313.3	315.5	314.5	315.2	316.9	315.2	317.4	311.8	310.9	314.8	320.5	322.1
Canned fruits	274.5	274.1	272.7	276.3	274.6	275.9	278.8	275.4	279.1	268.8	267.5	273.3	276.9	279.0
Canned fruit juices	359.5	378.5	377.5	377.5	377.4	377.4	377.1	260.8	377.8	379.5	260.8	380.1	389.3	390.1
Frozen fruits and juices	314.9	323.7	321.5	312.2	308.9	308.7	309.3	311.8	311.2	310.8	316.3	320.0	325.1	333.4
Consumer price index:														
Fresh fruits	369.3	350.8	353.3	352.0	367.9	385.5	372.4	382.2	391.5	384.5	375.1	360.6	355.8	389.1
								(1977=100)						
Index of fruit prices received by growers 1/	168	158	149	148	145	163	180	171	182	176	184	192	170	160

1/ Index for fresh and processed.

SOURCES: Bureau of Labor Statistics, U.S. Department of Labor, and Agricultural Prices, NASS, USDA.

Table 26.—Monthly average fruit prices received by growers, United States, 1986-87

Commodity and unit	1986												1987	
	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.
Apples for fresh use (cts./lb.)	0.167	0.172	0.172	0.172	0.207	0.211	0.280	0.300	0.223	0.201	0.185	0.179	0.179	0.195
Pears for fresh use (\$/ton)	328.00	352.00	417.00	440.00	604.00	838.00	280.00	341.00	341.00	419.00	396.00	390.00	376.00	407.00
Peaches for fresh use (cts./lb.)	.229	—	—	—	.244	.172	.193	.167	.215	—	—	—	—	—
Strawberries for fresh use (cts./lb.)	.968	.853	.634	.499	.430	.534	.547	.837	.825	1.44	1.14	1.22	—	.942
Oranges: (\$/box) 1/														
Fresh use	7.29	6.08	6.14	5.36	5.51	5.30	5.08	5.40	5.90	5.64	8.47	7.40	6.67	6.54
Processing	3.63	3.04	2.14	3.25	3.85	3.80	-1.15	-1.16	-1.16	-1.16	1.37	3.32	3.90	4.35
All	4.27	3.71	3.85	3.79	4.19	4.27	3.63	4.03	4.34	4.47	6.58	4.59	4.24	4.75
Grapefruit: (\$/box) 1/														
Fresh use	4.90	5.13	5.46	5.66	7.40	9.16	8.48	8.58	8.58	7.32	5.16	5.99	5.43	5.19
Processing	2.87	3.07	3.19	2.76	.49	-.54	-.53	-.52	-.52	2.07	2.93	3.45	3.80	4.19
All	3.78	3.76	3.94	4.22	5.20	5.98	6.17	6.76	6.63	6.29	4.19	4.54	4.50	4.55
Lemons: (\$/box) 1/														
Fresh use	11.93	8.48	7.91	8.77	8.35	13.05	14.52	14.48	6.76	5.67	6.43	7.11	6.33	5.44
Processing	-1.50	-1.50	-1.53	-1.52	-1.52	-1.52	-1.52	-1.00	-1.57	-1.64	-1.45	-1.08	-1.08	-1.08
All	6.58	4.39	4.06	4.47	4.53	7.81	8.96	8.37	2.60	1.56	1.88	1.45	1.82	1.13
Tangerines: (\$/box) 1/														
Fresh use	14.46	16.15	9.91	9.98	11.62	2.15	—	—	—	22.20	20.59	15.78	13.19	13.21
Processing	-.99	-2.60	-2.63	-2.72	-2.73	2.73	—	—	—	.10	-.60	1.32	1.42	-1.31
All	10.19	10.14	6.02	5.86	5.80	.52	—	—	—	16.68	14.85	11.77	8.53	10.19

1/ Equivalent on-tree returns.

SOURCE: Agricultural Prices, NASS, USDA.

United States
Department of Agriculture
Washington, DC 20250

OFFICIAL BUSINESS
Penalty for Private Use, \$300

FIRST-CLASS MAIL
POSTAGE & FEES PAID
U.S. Dept. of Agriculture
Permit No. G-145

Moving? To change your address, send
this sheet with label intact, showing new
address, to EMS Information, Rm. 228,
1301 New York Ave., N.W. Washington,
D.C. 20005-4788