

California's 1999 International Agricultural Exports

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Export markets are a major source of demand for California agriculture, and California remains the number one agricultural export state. However, the value of California agricultural exports to international markets decreased for the second year in a row in 1999. El Niño climate patterns, the Asian financial crisis, and recent low prices were key factors contributing to decreased export values in 1998 and again in 1999. This Issues Brief presents 1999 data and revised data for 1998 that are results of an ongoing effort by the UC Agricultural Issues Center to provide more accurate estimates of California's agricultural exports.

Continuing Effort

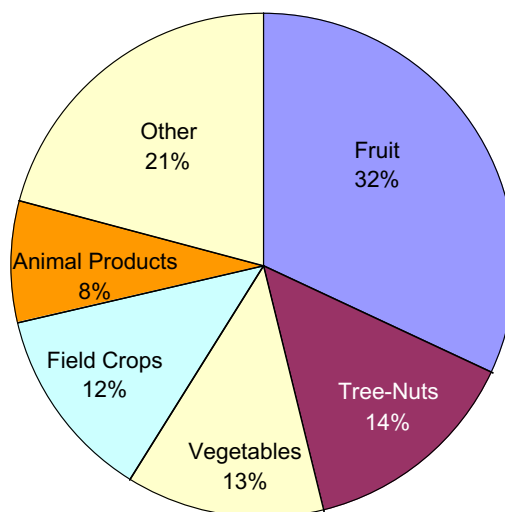
The UC Agricultural Issues Center recently completed the third year of its ongoing effort to develop methods leading to more accurate estimates for California's calendar-year agricultural exports. In addition to our annual update using the most recent data available, we again improved our methodology and applied this to revise earlier estimates. Here we summarize results. A detailed description of the export project's history, methods and the resulting 1995-1999 data are available on the AIC web page, <http://aic.ucdavis.edu/pub/exports.html>. This project has received encouragement and support from the California Department of Food and Agriculture, which uses the resulting data as the state's official agricultural export statistics.

Exports for Calendar Year 1999 Compared to 1998

Figure 1 displays the share of total export value by commodity group for 1999. Fruit, tree-nuts and vegetables account for about 60% of the total value of exports.

Table 1 shows export values for the top 50 export commodities during 1998 and 1999. About half recorded higher export values in 1999 than 1998, but for the others adverse weather and lower prices were important factors contributing to lower export values.

Figure 1: California Agricultural Export Value by Commodity Group, 1999



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Table 1 reveals that for 1999:

- The combined export value of grape products—wine, table grapes, raisins and juice—increased to over \$1 billion, making vineyards the leading source of agricultural export value in the state.
- Cotton export value decreased by 41%, largely due to uncommonly wet, cool weather that decreased 1998 production (most of which was exported in 1999).
- The export value of oranges dropped by 57% due to a late December 1998 freeze and other adverse weather conditions that decreased production by 45% below the previous season.
- Other commodities that decreased by more than 20% were pistachios, bell peppers, wheat and potatoes.
- Cherry export value more than tripled as production went from an extreme low in 1998 to a record high in 1999.
- Other commodities that increased more than 20% in export value were tomatoes (fresh), pears, apricots, eggs, figs, avocados, and artichokes.

Most commodities (37 of the top 50) shipped larger quantities in 1999 than in 1998. However for 12 of these, export value actually decreased because lower prices were more than enough to offset the added value of higher export quantities. For example, the quantity of almond exports increased by 6% between 1998 and 1999 but lower prices led to an 18% drop in export value. Other commodities among the top 20 with higher export quantities and lower values were rice, walnuts, prunes, broccoli and hay. Garlic was the most extreme case, with a 109% increase in quantity exported accompanied by a 16% decrease in value.

International Destinations

Table 2 shows the regional distribution of exports by commodity group, and Figure 2 shows the percent of exports shipped to each of the top 10 countries. Both were calculated based on the top 33 export commodities and eight additional commodities for which reliable data was available at the regional level. East Asia continues to be the top export region, receiving 40% of California's total agricultural export value and the largest share of fruit, field crops and animal products. Canada is the top export destination for vegetable products and the European Union is the top destination for tree-nuts. Central and South American countries, led by Mexico, accounted for 9% of the total export value.

Table 2: Percent of California Export Value Shipped to Major Markets by Commodity Group, 1999*

Destination Region	Fruit	Tree-Nuts	Vegetables	Field Crops	Animal Products	Total
East Asia	37	20	26	78	61	40
Canada	26	6	59	0	0	22
European Union	22	53	5	4	0	20
Central and South America	7	5	6	5	32	9
Other	7	15	5	13	7	9

* Totals do not account for highly processed products not attributable to a specific commodity, or too small to appear among the top 50 commodities.

Table 1: California Agricultural Commodity

Commodity	1999 Rank	Export Value (\$ million)	1998 Rank	Export Value (\$ million)	% Change
Almonds	1	623.8	1	759.5	-18%
Wine	2	498.5	3	505.7	-1%
Cotton	3	429.5	2	733.7	-41%
Table Grapes*	4	312.6	6	265.5	18%
Milk & Cream	5	311.1	5	275.1	13%
Tomatoes, Processed	6	222.8	7	224.4	-1%
Rice*	7	194.2	8	208.0	-7%
Raisins	8	191.7	9	194.6	-1%
Walnuts	9	147.5	11	150.5	-2%
Lettuce	10	144.6	13	125.6	15%
Beef and Products*	11	141.5	10	162.3	-13%
Oranges	12	139.1	4	320.2	-57%
Strawberries	13	133.7	14	122.0	10%
Prunes	14	130.2	12	134.1	-3%
Peaches/Nectarines*	15	108.2	16	92.0	18%
Pistachios	16	89.4	15	120.3	-26%
Broccoli	17	87.4	18	88.8	-2%
Hay	18	86.9	17	89.8	-3%
Lemons	19	86.8	19	87.1	0%
Cherries	20	63.8	35	13.7	367%
Tomatoes, Fresh	21	56.6	28	36.9	53%
Carrots	22	55.5	22	50.0	11%
Cauliflower	23	52.3	21	51.6	1%
Plums*	24	51.9	20	52.4	-1%
Flowers & Nursery	25	45.1	23	47.2	-4%
Asparagus	26	44.5	26	40.6	9%
Grapefruit	27	43.3	25	41.1	5%
Onions	28	42.6	27	39.7	7%
Celery	29	40.0	24	42.5	-6%
Apples	30	38.1	31	35.3	8%

Export Rankings and Values, 1998-1999

Commodity	1999 Rank	Export Value (\$ million)	1998 Rank	Export Value (\$ million)	% Change
Melons	31	36.9	30	35.3	5%
Grape Juice	32	31.6	32	28.5	11%
Garlic	33	30.4	29	36.2	-16%
Dry Beans	34	22.1	33	25.4	-13%
Pears	35	21.7	34	17.2	26%
Apricots*	36	15.6	41	11.3	38%
Eggs	37	12.8	44	7.7	66%
Olives	38	12.5	37	13.3	-6%
Chickens	39	11.2	39	12.8	-13%
Dates	40	10.9	42	11.0	-1%
Turkey	41	10.6	38	13.1	-19%
Kiwi	42	9.2	43	8.0	15%
Bell Peppers	43	8.6	40	12.7	-32%
Figs	44	7.6	46	5.8	31%
Avocados*	45	7.2	48	5.2	38%
Cottonseed oil	46	6.6	45	7.2	-9%
Wheat	47	5.7	36	13.5	-58%
Artichokes	48	3.9	49	2.7	44%
Potatoes	49	3.5	47	5.6	-39%
Mushrooms	50	1.1	50	1.0	6%

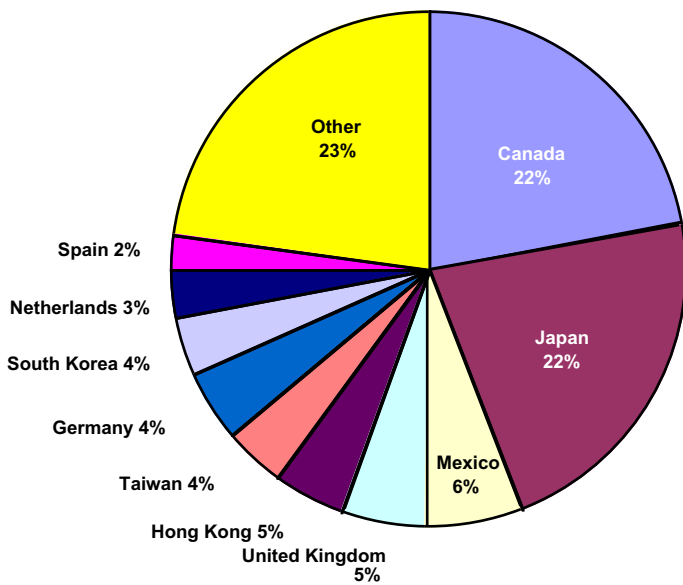
Total, 50 Principal Commodities		4882.6		5383.9	-9%
Total Other Products**		1232.2		1265.9	-3%
Total All Agricultural Exports		6114.8		6649.7	-8%

* The methods used to determine exports for these commodities were updated in 2000 and applied to 1998 and 1999 data. See <http://aic.ucdavis.edu/pub/exports.html> for details.

** "Total Other Products" is composed of (1) highly processed products that are difficult to attribute to a specific commodity, such as mixtures of fruits, nuts, and vegetables and other processed foods (for example, candy bars), and (2) animal and plant products marketed in such small quantities that they are not included in the 50 leading commodities.

Source: University of California Agricultural Issues Center

Figure 2: Agricultural Exports to the Top 10 Destinations by Value, 1999



Canada and Japan were the top two export destinations, each importing over \$1 billion total and at least \$2 million of each of 30 different commodities. Together, they account for almost half of the total export value of California agricultural products, with each importing over three times as much as the third ranked destination, Mexico. Canada is the major export destination for California vegetables, accounting in 1999 for over 70% of exports for each of the following: lettuce, fresh tomatoes, carrots, onions, melons and artichokes. Canada is also a significant export destination for many fruits, but imports virtually no field crops or animal products. Japan's imports are more dispersed among the commodity groups. Its 1999 imports by category were: fruit 36%, field crops 31%, vegetables 13%, tree-nuts 10% and animal products 9%.

European Union countries received about \$960 million of agricultural exports from California. Tree-nuts and grape products accounted for 83% of that total. They only imported about \$42 million of vegetable products and \$26 million of field crops.

While some commodities are mostly shipped to a single destination, such as hay to Japan (86%) and certain vegetables to Canada, others are shipped to multiple destinations. For example, almonds, table grapes, walnuts, prunes, pistachios and dates were widely distributed, with 6 or 7 destinations receiving 5% or more of their exports.

Farm Quantity Exported

For the top 15 export crops in 1999, Table 3 shows the ratio (as a percentage) of exports to farm production for calendar years 1998 and 1999. These ratios indicate general importance of export markets to that commodity. However, they do not necessarily represent the share of that year's production that was exported, since for many crops much of a calendar-year's exports were produced in the previous year. Cotton is one such crop; its high 1998 ratio compares unusually low 1998 production to exports that were mostly carryover from 1997, a normal growing year. Similarly, cotton's 1999 ratio reflects higher calendar-year production and relatively low carryover from 1998.

For the top 50 commodities, the weighted average ratio of exports to production was 16% in 1999, down from 19% the previous year. For individual commodities, it varied from 1% for potatoes to 64% for cotton. Among the top 50 commodities there were 15 with export ratios over 25% (those not included in Table 2 were grapefruit, dry beans, plums, asparagus, kiwi, onions, apricots and cauliflower).

We used standard conversion ratios to estimate the on-farm production that went to export markets. For example, we estimated the farm quantity of exported grapes by converting export quantities of raisins and wine to a fresh grape basis, and then adding this figure to fresh grape exports.

Table 3: Ratio of Farm Quantity Exported to Farm Quantity Produced

Commodity	1999	1998
	Percentage	
Grapes	18	17
Almonds	57	83
Cotton, Lint	64	127
Milk and Cream	7	9
Tomatoes, Processed	10	15
Rice	33	23
Walnuts	25	26
Lettuce	9	8
Beef and Products	9	8
Oranges	27	29
Strawberries	13	12
Prunes	40	60
Peaches/Nectarines	16	18
Pistachios	42	34
Broccoli	16	16
Weighted Average for the Top 50 Commodities	16	19

5-Year Perspective

The annual value of agricultural exports depends on many constantly changing factors including prices, yields, domestic and international production, quality, exchange rates, and economic and political conditions in importing nations. Favorable weather and prices led to higher export values in 1996 and 1997 as the total increased to \$7 billion in each year, up from \$6.4 billion in 1995. Then, during 1998 and 1999 export values of many commodities decreased as a result of the Asian financial crisis, El Niño climate patterns and low prices—down to \$6.6 billion total in 1998 and then to \$6.1 billion in 1999. However, California was less affected by these events than the nation as a whole; between 1995 and 1999 California's share of U.S. export value increased from 11.5% to 12.4%.²

The five years of data generated by the AIC reveal some significant patterns amid annual changes in export markets:

- International exports accounted for between 16% and 19% of California's farm production from 1995 through 1999.
- California is the major or sole exporter of many crops, accounting for 100% of total U.S. exports of 12 commodities (almonds, table grapes, raisins, walnuts, prunes, pistachios, garlic, olives, dates, kiwi, figs and artichokes) and for between 85% and 99% of another 12 (wine, processed to-

matoes, lettuce, strawberries, broccoli, lemons, cauliflower, plums, asparagus, celery, apricots and avocados).

- Cotton, almonds, wine, table grapes and oranges are the state's top export commodities, having ranked among the top five in at least four of the past five years.
- Canada, Japan, Hong Kong and South Korea are the top destinations for the state's agricultural exports, having ranked among the top five in at least four of the past five years.
- Wine had the greatest surge in export value of any commodity, increasing from \$210 million in 1995 to \$499 million in 1999. Export value decreased slightly in 1999, after four years of significant jumps.

This has been the third year that AIC has produced estimates for international exports of California's agricultural products, improving estimation methods and revising earlier figures. In 1999 the state's total export value decreased for the second year in a row, largely due to low prices. However, quantity exported actually increased for 37 of the top 50 commodities. And despite the decrease to \$6.1 billion total, California had a larger share of total U.S. exports than in 1996 and 1997 when it exported \$7 billion annually.

²The Economic Research Service of USDA estimates a higher share, using less precise methods. For a description of the different methods used by AIC, USDA, and other sources of state-level export statistics, see <http://aic.ucdavis.edu/pub/exports.html>.