

Data on California's 1998 Agricultural Exports

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In recent years, California has exported between \$6.5 and \$7 billion of agricultural products to international markets annually. The UC Agricultural Issues Center continues to collaborate with the California Department of Food and Agriculture to produce a more solid statistical basis for assessing these agricultural exports. This Issues Brief provides detail on California agricultural exports for the calendar year 1998, and revises some of our 1997 results.

The 1998 data reveal that:

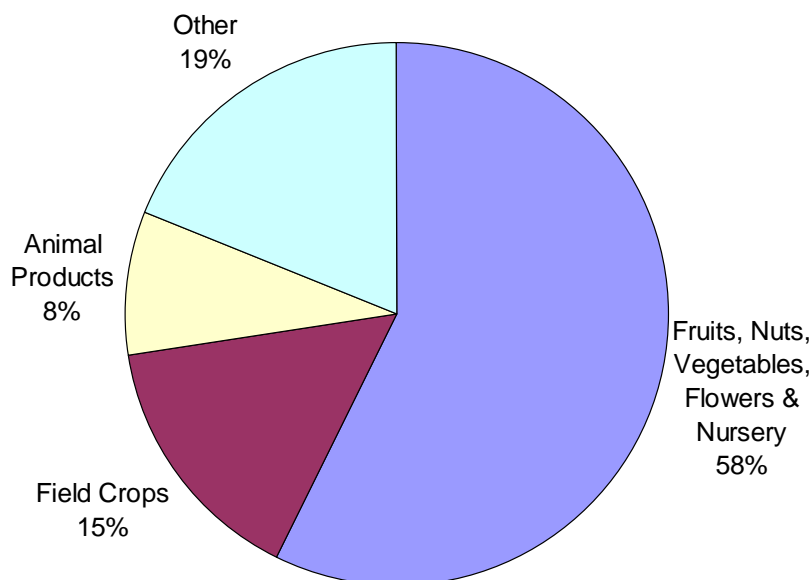
- The state's agricultural exports to foreign markets were valued at about \$6.7 billion in 1998, compared to the revised estimate of \$7 billion in 1997.
- Almonds, cotton, and wine continue to be the top exported commodities.
- Japan and Canada remain the largest export markets.
- California continues to export about 19% of its total agricultural production.

Improved methods

Last year, the AIC developed a methodology to generate export statistics for California focusing on the state's top 50 commodities—which account for over 90% of its farm production. Using a variety of data sources, we developed a specific procedure for each of these commodities, by combining formal calculations and informal adjustments depending on the commodity and industry. These commodity-specific procedures yielded approximations of total export values and quantities that were more accurate and informative than previously available figures. (For a more detailed description of these methods and results, see *AIC Issues Brief No. 8*, December 1998, at <http://aic.ucdavis.edu/pub/briefs.html>.) In 1999, using responses to our 1995-97 data from industry and government sources, we improved our original methodology. Then, using new data and methods, we generated export data for calendar year 1998 and revised our 1997 estimates.

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Figure 1
1998 California Agricultural Exports by Category



For lemons, flowers and nursery, pears, and cherries, changes in our estimation methods prevent comparison of the 1995 and 1996 values we published last year with the 1997 and 1998 values published here. The revised 1995 and 1996 values for those crops are \$128.6 and \$122.9 million for lemons, \$41.2 and \$40.6 million for flowers and nursery, \$16.8 and \$20.2 million for pears, and \$32.5 and \$36.8 million for cherries.

Exports in 1997 and 1998

Table 1 shows export values of 50 top export commodities during 1997 and 1998, and Figure 1 displays export values by category. Almonds, cotton, and wine are by far the largest exports in both years. Among the top 15 commodities, there are some significant increases and decreases, but the export value of most commodities remains relatively stable.

The table reveals that:

- Wine had the most significant jump in export value with an increase of 35% (\$130 million). This continues a trend; since 1995, wine exports have increased each year for a total increase of 141%.
- The other commodity in the top 20 to increase significantly was milk and cream, with 28% added in export value. Other commodities that increased by more than 20% were carrots and fresh tomatoes.
- Among the top 20 export commodities, cotton, table grapes, lemons, and hay decreased by 20% or more. Other commodities that decreased 20% or more were apples, cherries, wheat, turkey, cottonseed oil, avocados, and mushrooms.

- The export value of all grape products—wine, raisins, table grapes, and grape juice—increased to nearly one billion dollars and, if aggregated, would have topped the list.
- Horticultural crops (fruit, vegetables, and ornamentals) account for more than half of California’s total agricultural exports.

The sizable category in Table 1 titled “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 list of 50 leading commodities.

Exports related to farm production

We used standard conversion ratios to estimate the on-farm quantities associated with exported quantities. For example, we estimated farm quantity of exported apples by converting export quantities of dried apples and apple juice to a fresh apple basis, and then added this figure to fresh apple exports.

Comparing farm quantity exported to the farm quantity produced can indicate the importance of export markets to a particular commodity. Table 2 shows the ratio of farm quantity exported to farm quantity produced for California’s top 15 crop exports in 1998. This ratio does not necessarily represent the share of 1998 production exported, since some 1997 calendar year production was exported in 1998 and some 1998 calendar year production was exported in 1999. For example, the 127% figure for cotton obviously does not mean that 127% of 1998 cotton production was exported in that year. Rather, when considered in conjunction with cotton production data and background information, this figure indicates that much of 1997 production was exported in 1998—making total exports in that year large compared to relatively low cotton production. The ratio does, however, indicate

Table 1

1997 -1998 California Agricultural

Commodity	1998 Rank	Export value \$ million	1997 Rank	Export value \$ million	% Change
Almonds	1	759.5	2	818.3	-7
Cotton	2	733.7	1	918.3	-20
Wine	3	505.7	3	375.9	35
Oranges	4	320.2	5	308.4	4
Milk and Cream	5	275.1	8	214.8	28
Table grapes	6	259.7	4	330.3	-21
Beef and Products	7	252.7	6	262.0	-4
Tomatoes, Processed	8	224.4	7	226.3	-1
Raisins	9	194.6	9	199.8	-3
Walnuts	10	150.5	10	153.0	-2
Rice	11	144.7	11	144.4	0
Prunes	12	134.1	13	139.2	-4
Lettuce	13	125.6	14	120.8	4
Strawberries	14	122.0	15	116.5	5
Pistachios	15	120.3	16	113.4	6
Peaches/Nectarines	16	91.2	18	102.1	-11
Broccoli	17	88.8	19	87.7	1
Lemons	18	87.1	17	119.9	-27
Hay	19	87.0	12	141.2	-38
Cauliflower	20	51.6	21	49.8	4
Carrots	21	50.0	27	40.2	24
Flowers & Nursery	22	47.7	24	45.3	5
Plums	23	47.0	20	55.6	-15
Celery	24	42.5	22	46.6	-9
Grapefruit	25	41.1	31	35.6	15
Asparagus	26	40.6	29	39.8	2
Onions	27	39.7	30	36.7	8
Tomatoes, Fresh	28	36.9	34	30.2	22
Garlic	29	36.2	28	40.0	-10
Apples	30	35.3	25	44.0	-20

Commodity Export Rankings and Values

Commodity	1998 Rank	Export value \$ million	1997 Rank	Export value \$ million	% Change
Melons	31	35.2	32	35.4	-1
Grape Juice	32	28.5	33	31.3	-9
Dry Beans	33	25.4	35	26.5	-4
Pears	34	17.8	26	16.7	6
Cherries	35	13.7	23	45.5	-70
Wheat	36	13.5	36	26.2	-48
Olives	37	13.3	38	14.4	-7
Turkey	38	13.1	37	20.1	-35
Chickens	39	12.8	39	14.0	-8
Bell Peppers	40	12.7	41	12.0	6
Dates	41	11.0	42	11.2	-2
Apricots	42	10.3	43	11.1	-7
Kiwi	43	8.0	45	7.1	13
Eggs	44	7.7	44	9.4	-18
Cottonseed oil	45	7.2	40	13.1	-45
Figs	46	5.8	46	6.5	-10
Potatoes	47	5.6	48	5.0	13
Avocados	48	4.7	47	6.3	-25
Artichokes	49	2.7	49	2.7	1
Mushrooms	50	1.0	50	2.6	-60
Total Principal Commodities		5395.6		5673.2	-5
Total Other Products		1265.9		1322.3	-4
Total All Agricultural Exports		6661.5		6995.5	-5

Source: University of California Agricultural Issues Center

the high importance of exports to the cotton industry.

The average ratio of exports to production for the top 50 commodities is 19%. For individual commodities, the ratio varies from 1% for mushrooms to 127% for cotton. Animal products tend to have low ratios of between 1% and 9%.

International destinations

Figure 2 shows the foreign destinations for California's top 30 export commodities and seven additional commodities by individual country. Table 3 shows the regional distribution of commodity groups. Even during the 1998 Asian financial crisis, East Asian countries received 41% of California's agricultural exports. California shipped 73% of its exported field crops, 67% of its exported animal products, and 29% of its exported horticultural crops to East Asian countries during 1998. The European Union and Canada also received large shares of the total export value. Central and South American countries, led by Mexico, accounted for about 7% of total export value.

Japan imports a variety of California's animal

Figure 2
Percent of California's Agricultural Exports to the Top 10 Export Destinations in 1998

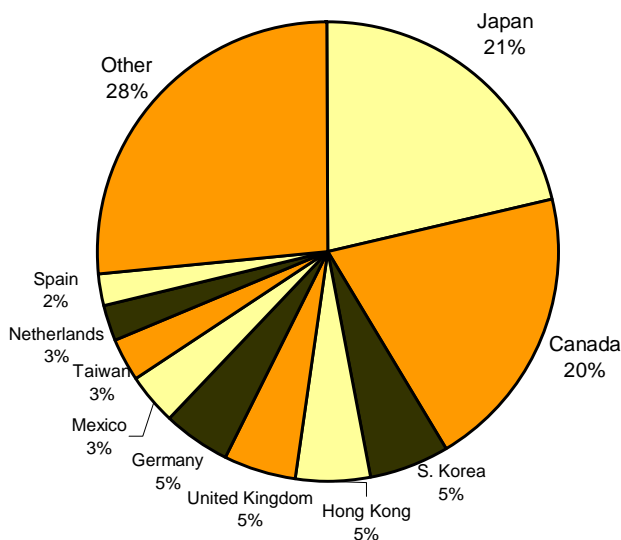


Table 2 Ratio of Farm Quantity Exported to Farm Quantity Produced

	1998 Percentage	1997 Percentage
Grapes*	17.1	20.5
Almonds	83.4	54.8
Cotton, Lint	126.8	82.3
Oranges	28.7	31.9
Milk and Cream	8.5	5.4
Beef and Products	7.6	9.2
Tomatoes, Processed	14.8	14.7
Walnuts	26.2	26.6
Rice	22.6	27.4
Prunes	59.7	35.9
Lettuce	8.3	7.8
Strawberries	12.1	12.3
Pistachios	34.5	31.6
Peaches/Nectarines	18.4	20.2
Broccoli	16.4	16.8
Weighted Average for the Top 50 Commodities	19.3	19.0

* Includes export values of fresh grapes, raisins, wine, and grape juice.

products and field and horticultural crops; it remains the single largest export destination, receiving about \$1.17 billion worth of exports in 1998. It imported over \$20 million of 17 different commodities. We know from anecdotal information that Japan is also a major destination for highly processed agricultural products not attributable to specific commodities and not counted in these totals.

Canada is the second largest single export market, accounting for nearly \$1.1 billion of California's agricultural exports in 1998. Canada imported more than \$2 million each of 30 different horticultural crops. All animal products and field crops combined accounted for less than 3% of Canada's imports from California.

European Union countries together accounted for about 22% (\$1.2 billion) of top agricultural commodity exports from California. These countries predomi-

nantly import processed horticultural products such as wine, nuts, and dried fruit. Field crops comprised about 3% of EU imports, and EU countries imported virtually no animal products from California.

While some California export commodities go mostly to a single market, others have multiple destinations. In 1998, 91% of hay exports, 72% of beef exports, and 56% of lemon exports went to Japan, while Canada received over half of California's processed tomatoes, lettuce, and strawberries. Conversely, nuts were much more widely distributed, with six or seven countries receiving at least 5% of California's almond, walnut, and pistachio exports.

Changes in Export Value

The value of agricultural exports depends on supply and demand conditions that can change annually, such as yields, income in importing countries, domestic production, quality, and currency exchange rates. Among other factors, changes in value of California's agricultural exports from 1997 to 1998 were affected by the Asian crisis and El Niño. Those two events played a dominant role in the decrease of total export value between 1997 and 1998. For example, El Niño climate patterns were a major factor in the abnormally low 1998 cotton production in California, and will also

likely affect 1999 export value.

The slump in the Asian economy resulted in income losses and exchange rate declines in many East Asian countries that are major export destinations for California agriculture. In 1998, total values of products exported to Japan, Korea, Hong Kong, Taiwan, China, and Indonesia were down from their 1997 levels—but East Asia still accounted for 41% of total exports of California's agricultural products. These facts highlight the continued importance of East Asian markets to California agriculture. Moreover, in the most important Asian markets, there has been a return to economic growth and export shipments seem to have rebounded in 1999.

AIC has again carefully assessed exports of California agriculture and improved on our data from last year. Exports continue to be an important source of demand for many important California commodities. Despite the slump in production due to El Niño and the drop in demand caused by the Asian financial crisis*, exports totaled about \$6.7 billion, down only marginally from 1997. ■

*For a more detailed examination of the effects of the Asian financial decline on California agriculture, see *AIC Issues Brief No. 9*, May 1999, on our website: <http://aic.ucdavis.edu/pub/briefs/brief9.html>.

Table 3 **1998 California Agricultural Exports**
Total export value and percent of total exports shipped by category, for specific commodities ^a

Country	Horticultural Products	Field Crops	Animal Products	Total ^b	Total ^b
	%	%	%	%	\$ million
East Asia	29	73	67	41	2,216
Japan	16	32	42	22	1,173
European Union	30	4	0	22	1,199
Canada	28	2	1	20	1,094
Central and South America	5	6	16	7	355
Other	7	11	10	9	413
Total (\$ million)	\$3,817	\$1,017	\$561		\$5,396 ^b

^a This measure does not account for distribution of other commodities, where other commodities are highly processed products not attributable to a specific commodity, or too small to appear on the list of the top 50 exported commodities.

^b Totals by destination do not add to \$5,396 (or 100%) since they do not include export values for 12 of the top 50 commodities with lower export values, which have a combined export value of \$119 million.