

California's International Agricultural Exports in 2001

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Recent data developed at the Agricultural Issues Center finds that the value of California's agricultural exports in 2001 remained unchanged from 2000 at about \$6.5 billion. This *AIC Issues Brief* describes international agricultural exports for 2001 and revisions for 2000. We show patterns by commodity and destination and discuss improvements in our procedures. For further details by commodity and destinations see our website: www.aic.ucdavis.edu/.

Data background and methods

The U.S. Department of Commerce reports official import and export statistics for the United States and provides details by port of exit and entry. However, there are no official U.S. government data on exports of goods produced in individual states. The data reported here are the product of the fifth year of our effort to develop accurate estimates of the value of California agricultural products shipped to international markets. These estimates represent a collaboration between AIC and the California Department of Food and Agriculture. This is the fifth *AIC Issues Brief* based on the resulting export data. More detail about the history, methods, and early results from the project are available on our website, along with export data since 1995, at www.aic.ucdavis.edu/pub/exports.html. The website also contains additional detail for individual commodities and markets.

Our estimates of California agricultural exports differ from approximates reported by other sources. We have developed separate procedures for each of 50 of California's top agricultural commodities and a process for assessing California content for exports of mixtures of products. We

based our estimates on various sources, mainly the U.S. International Trade Commission database (which contains official U.S. Department of Commerce data), Canadian official statistics, and industry sources. The data from each source was checked and analyzed with particular emphasis on formal or informal reports from California industry experts.

The U.S. Department of Commerce reports state level exports based on the Census Bureau's Exporter Location, which uses the Standard Industrial Classification at two-digit denomination and allocates exports to states according to the location of the exporter of record. This method does not provide reliable estimates on the farm production origin of agricultural exports and does not provide sufficient commodity detail to be useful for our purposes. The Census Bureau also produces reports based on Origin of Movement, traditionally known as the "MISER" series (for Massachusetts Institute for Social and Economic Research). The MISER series allocate exports according to the point of origin of movements, that is, where the product begins its export journey. As a consequence, a state with a port through which a large amount of agricultural products are exported may lead to an overestimate of that state's exports of commodities produced in another state but that has no port of exit. For example, most of California potatoes are for fresh consumption, but a large amount French fries and other processed products that originate in neighboring states are shipped from California ports, which would lead to an overestimate of California exports of potatoes. Our procedures account for these concerns by not relying solely on port data. Industry sources helped develop commodity-specific procedures and revise the

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methods as new data becomes available and trade flows change.

To gather dairy export data we used a survey of 139 dairy processing firms that operate in California and followed-up by telephone to clarify responses. Again this year we worked with the CDFA Milk Pooling Branch and industry sources to improve the survey questions and coverage.

Agricultural Exports in 2001

While California agricultural export value remained almost unchanged from 2000 to 2001, U.S. agricultural exports increased somewhat, so that California's share of U.S. agricultural exports decreased from about 12.8 percent by about half of a percent point, to 12.3 percent. This represents a somewhat smaller share than California represents in national agricultural production.

Table 1 provides the agricultural product specifics for exports by commodity for 2001 and 2000 (revised). We divide the exports into the top 50 agricultural products by export value and a second category comprised of smaller commodities, mixtures of commodities and other agricultural products for which the commodity composition is difficult to separate. Of the \$6.5 billion in exports in 2001, \$5.35 billion was associated with these 50 principle commodities and the remaining \$1.17 billion was associated with other products and composites.

Table 1 shows that ranking for the top 10 export products did not change from year 2000 and almonds and cotton are again the top two export products. However note that if the four grape export products—wine, table grapes, raisins and grape juice—are combined, as they are for most other farm commodities, the total value of grape exports are more than \$1 billion, easily topping the list. Total value of exports of the grape industry, showed little change in export value. Wine export decline was offset by an increase in table grapes exports. Cotton exports did not change significantly in dollar terms despite an increased volume of about 9 percent. Cotton exports remain well below the 1995-99 average annual value, which was approximately \$827 million. Overall, the top 10 products account for two-thirds of total export value of the 50 principle commodities and more than half of all agricultural exports.

Table 1 also shows that 21 out of the 50 principal export products increased in export value from 2000,

while 27 products decreased their export value. The change in value is the product of changes in export quantity and export unit value or price. For many export commodities prices were low in 2001, so a decline in export value may occur even if quantity exported was up.

Figure 1 shows the share of total export value by commodity group in 2001. This pattern has changed little in recent years with a gradual shift to more fruit and nut exports and a lower share for field crops. Together, fruits, wine, tree-nuts and vegetables accounted for about 56 percent of the state's total agricultural export value. Fruit and tree-nuts accounted for a higher share of California's export value than the state's production value, while vegetables accounted for a lower share. Note that most of the Mixture and Others category is comprised of highly processed products and is hard to separate into individual commodities. It also tends to have a high off-farm component of value exported.

International Destinations

Table 2 shows export distribution by commodity group to the major countries or regions. The distribution of exports by destination is based on 42 commodities—the top 36 export commodities plus 6 additional commodities for which reliable data on export destinations were available. No reliable destination data is available for eight commodities with relatively low export values, or for the exports of the mixtures and other commodities categories. Using these data East Asia was the top export region again in 2001, receiving about 40 percent of the total export value, one percent point higher than in 2000. Within East Asia, Japan accounts for slightly less than half of the exports to the region. The second most important export region is North America, with 29 percent of the total. Within North America, Canada, accounts for 22 percent of exports and Mexico accounts for seven percent. Europe is the third most important destination with almost all European exports shipped to the 15 countries of the European Union. These three top regions account for 90 percent of exports.

Table 2 also provides export destination by commodity group. East Asia received more than 60 percent of animal product exports, 56 percent of field crops exports, and about half of fruit exports. North America accounted for 70 percent of vegetable exports, and Europe almost two-thirds of wine exports and about half of tree-nut exports. While some commodities are shipped mostly to a single destination, such as bell

Table 1. California Agricultural Export Values and Rankings,
2000-2001

Commodity	2001 Rank	Export Value \$ million	2000 Rank	Export Value \$ million	% Change 2000-2001 ¹
Almonds	1	685.6	1	662.4	3
Cotton	2	604.5	2	606.7	0
Wine	3	470.9	3	499.3	-6
Table Grapes	4	394.5	4	363.4	9
Dairy	5	338.4	5	347.6	-3
Oranges	6	297.5	6	298.1	0
Tomatoes, Processed	7	211.7	7	207.7	2
Walnuts	8	179.1	8	169.3	6
Rice	9	166.4	9	167.3	-1
Beef and Products	10	154.8	10	162.9	-5
Prunes	11	149.5	13	140.3	7
Raisins	12	144.1	12	145.9	-1
Lettuce	13	142.6	11	156.0	-9
Strawberries	14	136.1	14	138.7	-2
Peaches/Nectarines	15	118.7	16	106.1	12
Pistachios	16	108.9	17	97.9	11
Broccoli	17	89.2	15	114.3	-22
Hay	18	86.3	18	93.6	-8
Lemons	19	74.7	19	79.5	-6
Carrots	20	68.0	21	58.2	17
Cherries	21	63.7	28	42.2	51
Tomatoes, Fresh ²	22	56.6	20	72.6	-22
Plums	23	53.5	23	54.4	-2
Celery	24	46.0	22	55.2	-17
Cauliflower	25	45.5	25	44.9	1
Onions	26	40.8	27	43.1	-5
Flowers and Nursery	27	39.7	26	43.3	-8
Melons	28	39.3	29	40.5	-3

Table 1. **California Agricultural Export Values and Rankings, 2000-2001** (continued)

Commodity	2001 Rank	Export Value \$ million	2000 Rank	Export Value \$ million	% Change 2000-2001 ¹
Grapefruit	29	38.9	32	32.2	21
Grape Juice	30	31.4	31	32.5	-3
Asparagus ²	31	31.0	24	46.8	-34
Potatoes ²	32	26.4	33	29.3	-10
Apples	33	25.7	30	37.1	-31
Garlic	34	24.8	34	24.4	1
Pears	35	24.0	35	20.3	18
Bell Peppers	36	18.3	36	20.1	-9
Turkey	37	17.4	37	16.2	7
Apricots	38	15.6	38	14.0	11
Cottonseed byproducts ²	39	15.1	39	12.6	20
Dates	40	11.5	41	11.3	2
Chickens	41	11.3	43	10.5	8
Olives	42	10.3	40	12.3	-16
Eggs	43	8.6	44	9.7	-12
Figs	44	6.7	45	7.6	-12
Kiwi	45	6.4	46	6.7	-3
Dry Beans	46	5.6	42	10.9	-48
Wheat	47	3.9	48	3.4	15
Mushrooms	48	3.4	50	2.4	40
Artichokes	49	3.3	49	2.7	20
Avocados	50	2.1	47	3.4	-40
Total 50 Principal Commodities		5,348.6		5,378.1	-1
Total Other Products ³		1,173.4		1,148.3	2
Total All Agricultural Exports		6,521.9		6,526.4	0

*Actual values are reported. Numbers may not equal due to rounding.

¹Revised 2000 data

²The methods used to determine exports for these commodities were updated in 2002 and applied to 2001 data and revised 2000 data.

³"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; and (2) animal and plant products marketed in such small quantities that they are not included in the 50 leading commodities.

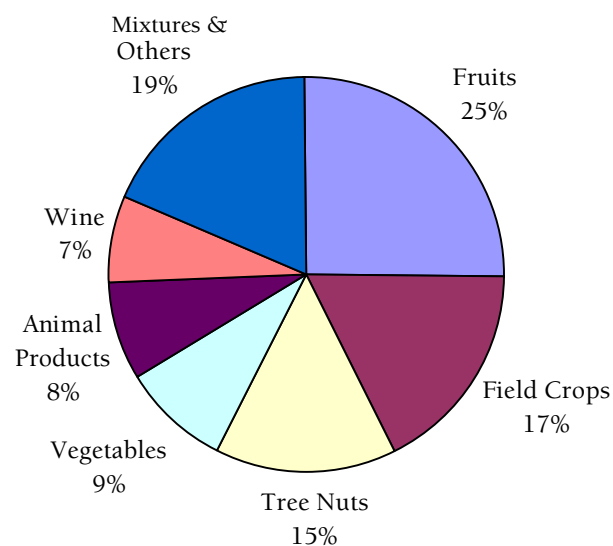
peppers, carrots, and lettuce to Canada (above 80 percent) and hay to Japan (75 percent), others are shipped in large quantities to many destinations. For example, cotton and apples are widely distributed, with at least 6 destinations receiving 5 percent or more of these exports.

Figure 2 shows the share of total export value shipped to each of the top 9 countries and the EU as a group. Figure 2 shows that, as in previous years, Canada and Japan were the top two export destinations in 2001, each receiving approximately \$1 billion in exports. Together they accounted for about 41 percent of California's exports. Canada imported at least \$2 million of each of 41 different commodities, and Japan received \$2 million or more of exports of 31 different commodities. Canada's imports mainly consist of fruits and vegetables; it imports virtually no animal products from California. European Union countries as a group imported about \$1 billion of agricultural products from California in 2001. In our past reports, European countries, whether members of the European Union or not, were reported individually. This is problematic because of easy transshipment within Europe. It is often unclear if an imported product is consumed in the country into which it is initially shipped. This year we combined EU members.

Farm Quantity Exported

Table 3 shows the ratio of farm quantity exported to farm quantity produced in 2000 and 2001. We used standard USDA conversion ratios to translate export quantities of processed products back to farm gate

Figure 1. California Agricultural Export Value by Commodity Group, 2001



production. For example, to estimate the farm quantity equivalent of all grape products in terms of fresh grapes, we converted export quantities of raisins, wine and grape juice back to fresh grapes and then added this figure to fresh grape exports.

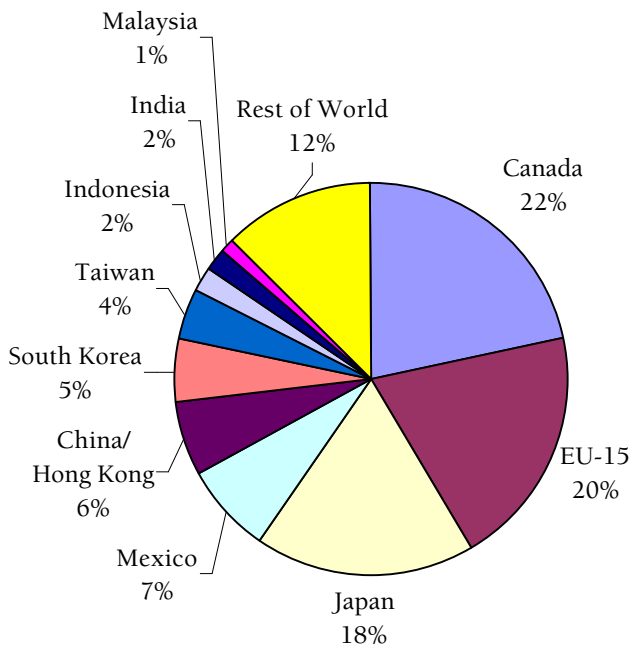
For some crops, such as cotton, the ratio of farm quantity exported to farm quantity produced may not represent the share of the year 2001's production because the exports may have been produced in a previous year and stored before export. For other crops that are not easily stored, such as lettuce and table grapes, this ratio approximates the annual share of farm production exported, except when harvest is late in the year and shipments take place early in the

Table 2. Percent of California Export Value Shipped to Major Markets by Commodity Group, 2001¹

Commodity group	East Asia		Europe		No. America		Rest of World
	Japan	Total	EU	Total	Canada	Total	Total
Animal products	27	61	0	1	1	33	4
Field crops	25	56	5	5	15	22	17
Fruits	18	48	11	12	28	33	7
Tree nuts	12	22	49	51	6	9	18
Vegetables	16	23	3	5	63	70	3
Wine	10	15	62	64	17	17	4
All commodities	18	40	20	21	22	29	10

¹Dairy byproducts, flowers and nursery, and minor products are not included in this table. Totals may not add due to rounding.

Figure 2. **California Agricultural Exports to the Top 10 Destinations by Value, 2001**



subsequent year. Nonetheless, the data in Table 3 provide a picture of the importance of exports across commodities.

The weighted average ratio of exports to production for the top 50 commodities was 17 percent in 2001, a small drop from 18 percent in 2000. The ratio ranged from 1 percent for avocados to 87 percent for cotton. Fourteen commodities had a ratio equal or higher than 25 percent in 2001, including 7 of the top 15 listed in Table 3, plus cherries, plums, grapefruit, apples, apricots, dates, and kiwi.

Conclusions

The data show that 2001 was another difficult year for California agricultural exports, with low export prices reflecting a strong dollar and low commodity prices. Furthermore, several commodities and commodity groups, such as dairy and fresh vegetables, that typically export a small share of output, are a growing share in the value of farm production. No data is yet available for 2002, but early indications are that with declines in the value of the dollar late in the year, large California crops, and stabilized prices, we may find that exports have grown when the 2002 data are assembled. ■

Table 3. **Ratio of Farm Quantity Exported to Farm Quantity Produced (Top 15 export commodities)**

Commodity	2000 Percent	2001 Percent
Grapes, all	16	22
Almonds	71	67
Cotton	78	87
Dairy	7	6
Oranges	27	27
Tomatoes, process.	13	13
Walnuts	46	33
Rice	32	49
Beef and products	6	6
Prunes	40	69
Lettuce	8	8
Strawberries	15	13
Peaches, nectarines	10	11
Pistachios	23	50
Hay	8	7
Weighted Average		
Top 50	18	17

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Accessibility of Government Trade Data

For those interested only in international trade in agricultural products, the USDA Economic Research Service (ERS) has created an online database where users can search the Department of Commerce trade data by commodity and country from 1989 to the present. The U.S. International Trade Commission database is located at <http://dataweb.usitc.gov/> and the ERS database is available at <http://www.ers.usda.gov/data/fatus/>. By making it easier to collect export data, the online trade databases have allowed us to dedicate more resources to improving our commodity-specific methods of estimating exports. The online trade databases may be a useful resource for anyone interested in U.S. international trade of agricultural or nonagricultural products.