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## **The Economic Impact of California Specialty Crops – A Regional Perspective**

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## **Executive Summary**

The goal of this study, conducted by California Polytechnic State University, San Luis Obispo, is to analyze the economic impact of specialty crops at the county level in California. The top five specialty crops in each of the top five specialty crop-producing counties will be of primary interest. The hope is to provide industry leaders and policy makers with more information about the broader economic importance of specialty crops to local economies.

The study was based on collecting secondary data from government sources as well as conducting a survey of 59 specialty crop agribusinesses in Monterey, Fresno, Kern, Tulare and San Diego counties. An input-output modeling program and supplementary database was used to estimate county-level economic impacts of the specialty crop production and processing industry.

### **Key Findings:**

The majority of agribusinesses in specialty crop industry are vertically integrated, according to survey respondents. Fifty-eight percent reported participating in at least two parts of the marketing channel, most commonly starting at the grower level and going up one or two steps to packing, processing or cooling.

Most specialty crop agribusinesses responding to the survey (80%) report being year-round operations. Of the year-round workers hired by these firms, 80% of them are full-time employees. However, a large majority of employees reported by the respondents are considered seasonal.

Full-time, hourly employees in the businesses surveyed earn an average of \$9.92/hr, compared with \$7.87/hr; a 26% difference. Full-time workers earn more than the state average for specialty crop workers, but part-time workers earned slightly less than the state average.

Economic Impact: Following is a summary of the economic impact of specialty crops for each of the study-area counties.

- In Monterey County, specialty crops and related industries contribute:
  - 11.5% of total income
  - 12.2% of total value added
  - 16.2% of jobs
  
- In Fresno County, specialty crops and related industries contribute:
  - 8.12% of total income
  - 12.7% of total value added
  - 12.6% of jobs
  
- In Kern County, specialty crops and related industries contribute:
  - 5.8% of total income
  - 8.4% of total value added
  - 9% of jobs
  
- In Tulare County, specialty crops and related industries contribute:
  - 9% of total income
  - 15.3% of total value added
  - 12.4% of jobs
  
- In San Diego County, specialty crops and related industries contribute:
  - 0.7% of total income
  - 1.1% of total value added
  - 1.2% of jobs

## INTRODUCTION

As the largest agricultural state in the country, the farm gate value of California agriculture receives a fair amount of publicity. Each year, the new statistics for agricultural sales are published in both agricultural and popular media outlets. In 2003, California growers produced \$32.5 billion worth of farm products, a 6% increase from 2002 (California Agricultural Statistics Service). However, as impressive as these numbers are, they do not come close to portraying the true importance of the agricultural sector in California. Farm level sales provide only the first round effects in the economy, and do not describe agriculture's relevance in terms of job creation, personal income and indirect economic impact.

Of the 350 different agricultural commodities produced in California, specialty crops are considered particularly important to the economy. The most recent California agricultural statistics show that fruit, nuts, vegetables and nursery products (including flowers and foliage), account for 64 percent, or \$20.87 billion of the total sales value of California agriculture.

Several studies have looked at the economic impact of agriculture in California. An analysis using agricultural statistics from 1998 suggests that agriculture contributes between 6 and 7% of the state's total income, with much larger impacts in concentrated agricultural regions such as the Central Valley. Nearly 24% of the employment in the Central Valley was attributed either directly or indirectly to agriculture. When the Central Valley was segmented into the San Joaquin and Sacramento Valleys, the agricultural production and processing industry was shown to account for 32 percent of the income and 37 percent of the employment in the San Joaquin Valley, which contains state's largest agricultural counties. Fruits, tree nuts, and vegetables represented about half of those totals (Kuminoff, et. al).

Region or crop-specific studies identify more disaggregated impacts. A 1995 report documenting agriculture's impact in Ventura County showed that agriculture provided for just over 8% of both the county's employment and personal income (McCluskey and Goldman). A more recent study in Monterey County showed that the \$2.9 billion in crop production sales

value expands to about \$5.2 billion in direct, indirect and induced economic activity (Applied Development Economics). Monterey County's agriculture is comprised almost exclusively of specialty crops. The study was conducted to show the potential economic loss of agricultural land conversion to development, in accordance with the Monterey County's General Plan Buildout. A conversion of nearly 12,800 acres was estimated to result in a loss of \$232 million in economic activity in Monterey County's agricultural activity.

A comprehensive study showing the environmental horticultural industry's economic impacts in California reported that state residents spent \$8.52 billion on environmental horticulture, and generated related sales of an additional \$10.1 billion in 1995. Environmental horticulture included turf, cut flowers, houseplants, Christmas trees, as well as public and commercial landscape expenditures in this particular study. A more recent study of California's nursery industry showed combined floral and nursery sales of \$13.26 billion in 2002 (Carman). This figure includes both farm gate and retail sales of lawn, garden and floral products sales. This particular study did not estimate indirect and induced effects of the horticultural industry, but did credit the industry with providing over 171,500 jobs.

The goal of this study is to add to the literature by providing a preliminary view of the economic impact of specialty crops in those counties in which specialty crops are the most prevalent in the agricultural economy.

## **Objectives**

The impact of the top five specialty crops will be analyzed in each of the top five counties that produce specialty crops, in terms of sales, value-added, employment and indirect economic impact on the respective counties as well as on California. As this study was funded for six months, the researchers tried to choose a reasonable number of counties and crops to include in the analysis. The goal was to be able to supplement the aggregated data available from secondary sources with primary data collection to further quantify the economic value of the

specialty crops in the respective counties. This project will provide a basis for further, statewide investigation of the economic impacts of specialty crops.

### Data Collection

The study employed both secondary and primary data to analyze the economic impacts. Secondary data, available from California Agricultural Statistics, USDA’s National Agricultural Statistics Service, the U.S Department of Commerce and the U.S. Bureau of Labor Statistics provided farm-level production, sales and employment. In addition, surveys were distributed to the processing or value-added firms or cooperatives in each county that deal with the specialty crops in question.

In order to analyze county-level and regional impacts with respect to specialty crop production, this study, using data from 2003 County Agricultural Commissioners’ reports identified the top five specialty crop production counties. Essentially, crops and livestock products supported by the 2002 Farm Bill were eliminated from consideration. The most recent California production data available shows that 11 counties are the primary source of specialty crops, as depicted on the following table.

**Table 1. Total Gross Value of Specialty Crop Products by Leading Counties, 2003**

Commodity Group	Total Value	Five Leading Counties Within Group		
		County	Value	Portion of State Total
	\$1,000	\$1,000		Percent
Fruit and Nut	10,034,424	Fresno	1,450,042	14.5
		Tulare	1,356,387	13.5
		Kern	1,123,490	11.2
		San Joaquin	593,542	5.9
		Ventura	591,667	5.9
Vegetable	7,399,344	Monterey	2,544,908	34.4
		Fresno	1,253,144	16.9
		Kern	502,360	6.8
		Imperial	442,928	6.0
		Santa Barbara	376,091	5.1
Nursery Products, Flowers and Foliage	3,440,456	San Diego	927,059	26.9
		Monterey	242,201	7.0
		Ventura	217,777	6.3
		Orange	214,232	6.2
		Riverside	205,846	6.0

Source: Summary of County Agricultural Commissioners’ Reports, 2002-03.

Further aggregation of the data show that the top five specialty-crop producing counties are as follows:

**Table 2. Top Five Specialty Crop-Producing Counties**

	<b>Fruit/Nut</b>	<b>Vegetable</b>	<b>Nursery</b>	<b>Total</b>
Value in \$1000				
1. Monterey		\$2,544,908	\$242,201	\$2,787,109
2. Fresno	\$1,450,042	\$1,253,144		\$2,703,186
3. Kern	\$1,123,490	\$502,360		\$1,625,850
4. Tulare	\$1,356,387			\$1,356,387
5. San Diego			\$927,059	\$927,059

Source: Summary of County Agricultural Commissioners' Reports, 2002-03.

When total agricultural commodity value is considered, as is frequently reported in the media, the rankings of the counties are quite different. The top five agricultural counties, as reported for 2003, are Fresno (\$4.05 billion), Tulare (\$3.29 billion), Monterey (\$3.28 billion), Kern (\$2.47 billion) and Merced (\$1.91 billion). However, removing commodities that receive government support such as dairy, cotton and rice shows a quite different picture in terms of economic importance. Fresh and processed fruits, tree nuts and vegetables have been shown to contribute \$30 billion in personal income and 567,000 jobs to California, greater than any other type of commodity group (U.C. Agricultural Issues Center).

Further investigation into each of the five counties' agricultural production led to the following tabulation of each county's top five specialty crop products for 2003. The numbers of farms producing each commodity was not available in each county; some counties estimate the number of farms producing each commodity from pesticide and restricted use permits, but in two counties this data was not provided. The number of harvested acres for each crop was collected in every county, and is reported below.



**Table 3. Leading Specialty Crop Commodities for 2003: Gross Sales Value by County**

	<b>Commodity</b>	<b>Sales Value (\$1000)</b>	<b>Harvested Acres</b>	<b>Number of Farms*</b>	
<b>Monterey</b>	Lettuce, Leaf	\$552,649	63,036		
	Lettuce, Head	\$489,306	71,731		
	Broccoli	\$280,434	47,984		
	Strawberries	\$253,347	8,472		
	Nursery Product	\$240,898	2,023		
	Grapes	\$160,219	34,287		
	<b>Total</b>		\$1,976,853	227,533	
<b>Fresno</b>	Grapes	\$400,842	218,357	1,915	
	Tomatoes	\$384,290	126,000	282	
	Poultry	\$246,520		10	
	Oranges	\$215,349	34,392	360	
	Almonds	\$201,596	65,018	467	
	<b>Total</b>		\$1,448,597	99,410	
	<b>Kern</b>	Grapes (all)	\$402,820	82,427	219
Almonds		\$280,504	89,936	267	
Citrus (fresh & proc)		\$278,016	43,312	112	
Carrots (fresh & pro)		\$269,132	*	82	
Nursery Crops		\$100,702	3,959	50	
<b>Total</b>			\$1,331,174	219,634	
<b>Tulare</b>	Oranges, Navel and Valencia	\$442,504	100,073	1,765	
	Grapes	\$378,511	73,064	754	
	Plums	\$85,500	18,235	490	
	Peaches - all	\$70,092	15,309	354	
	Walnuts	\$68,970	33,551	505	
	<b>Total</b>		\$1,045,577	240,232	
<b>San Diego</b>	Flowers, Foliage	\$312,116	507		
	Nursery, Woody Ornamentals	\$247,520	3,134		
	Nursery, Bedding Plants	\$201,255	905		
	Avocados	\$146,171	25,482		
	Flowers, Cut	\$83,748	3,607		
	<b>Total</b>		\$990,810	33,635	

Source: 2003 County Ag Commissioner's reports, various counties

\*Not reported by Monterey and San Diego Counties

The production figures for the top five specialty crop products in each county were used to develop the list of processing firms to which the surveys would be mailed. The list of processors, shippers and/or handlers was developed via several methods. Several agricultural

commissioner offices made available lists of processors or second handlers for various agricultural products; while some commodity marketing boards or commissions kept lists of such companies. To complete the list of second handlers and processors for the top five specialty products in each county, local business directories were consulted. A list of 541 business addresses was compiled. The survey was designed primarily to learn more about specific employment, payroll and sales revenue for those companies that comprise the steps in the marketing channel between production and retail.

The surveys were prepared and mailed in mid-July, with a requested return date of mid-August. A number of surveys (94) were returned due to address problems. A total of 59 usable surveys was tabulated. The results are presented in the following table.

**Table 4. Areas of Marketing Channel for Specialty Crop Agribusinesses**

	Firms Responding	Grower	Processor	Packer	Shipper	Cold Storage	Other
Monterey	18	13	4	7	9	3	3
Fresno	14	6	4	9	8	5	3
Kern	18	10	2	11	9	8	6
Tulare	4	3	2	3	3	2	0
San Diego	5	1	1				3
Totals	59	27	13	30	29	18	15

Of the 59 respondents, 58 percent indicated that they were vertically integrated; they participated in more than one section of the marketing channel. The most common combination was a grower who also processed, packed, shipped or stored the commodities. The “other” category most commonly included wholesalers or distributors (5), and two self-reported as grower-owned cooperatives.

The types of products grown varied widely among respondents, as expected. The survey included options for the 15 different commodities that had been identified in the top five specialty crops among the five counties. Table 5 shows the results of the commodities that the agribusinesses in each county dealt with. The category listed as “other” included many specialty crops that were not part of the top five specialty crops in each county, so they were aggregated.

**Table 5. Specialty Crops Produced, Processed or Handled by Respondents**

	Almonds	Broccoli	Carrots	Citrus <sup>(a)</sup>	Grapes	Lettuce <sup>(b)</sup>	Stone Fruit <sup>(c)</sup>	Nursery	Straw-berries	Tomatoes	Walnuts	Other
Monterey	0	12	5	2	3	13	1	1	6	2	0	10
Fresno	1	2	1	4	5	1	2	0	2	3	1	12
Kern	5	2	7	5	6	3	2	0	2	3	1	11
Tulare	0	0	0	2	1	0	2	0	0	0	0	0
San Diego	0	4	4	3	3	4	3	1	2	3		
Totals	6	20	16	16	18	21	10	2	12	11	2	33

(a) Includes various types of oranges and lemons

(b) Includes both head and leaf lettuce

(c) Includes peaches and plums

The seasonality of the business and full-time, year-round, versus part-time, seasonal employment was considered important to determining the economic impact of the specialty crop industry in these counties. Tables 6 and 7 show these results.

**Table 6. Specialty Crop Business Seasonal vs. Year-round Operation**

	Year – Round Operation		Seasonal Operation	
	Number	%	Number	%
Monterey	16	89%	2	11%
Fresno	11	79%	3	21%
Kern	13	72%	5	28%
Tulare	2	50%	2	50%
San Diego	5	100%	0	0%
Totals	47	80%	12	20%

By far the majority of responding businesses were year-round operations, but most of the businesses also reported hiring seasonal workers. Table 7 shows the number of year-round and seasonal employees reported by the responding businesses in each county.

**Table 7. Year-Round vs. Seasonal Employees in Specialty Crops**

	Year – Round Employees		Seasonal Employees	
	Number	%	Number	%
Monterey	3,060	65%	1,672	35%
Fresno	696	20%	2,046	80%
Kern	1,143	14%	7,178	84%
Tulare	192	14.5%	1,132	85.5%
San Diego	65	97%	2	3%
Total	5,156	30%	12,030	70%

It is clear that even with this relatively small sample that the specialty crop industry relies heavily on seasonal workers, which is not a surprising result. In Kern County, two respondents

provided hiring of seasonal employees of over 1,000 in each business, contributing to the enormous difference between year-round and seasonal employees across the five counties.

Each business was also asked to classify their employees as either full-time or part time. The results are shown in Table 8.

**Table 8. Full-Time vs. Part-Time Employment**

	Full-Time Employees		Part-Time Employees	
	Number	%	Number	%
Monterey	3,257	87%	473	13%
Fresno	1,750	80%	426	20%
Kern	1,497	70%	628	30%
Tulare	194	60%	130	40%
San Diego	65	97%	2	3%
<b>Total</b>	<b>6,763</b>	<b>80%</b>	<b>1,659</b>	<b>20%</b>

The total number of employees reported in Table 8 is lower than the total number of employees reported in Table 7. It appears that several respondents who hired large numbers of seasonal employees did not record these employees as either full- or part-time, preferring to keep them classified simply as “seasonal.”

The survey also asked businesses about average wage rates for their employees, classified as full-time, part-time and salaried. Table 9 reports these findings for hourly workers.

**Table 9. Average Hourly Wages for Full-Time and Part-Time Employees**

	Full-Time Employees		Part-Time Employees	
	Average Wage (\$/hr)	No. Firms Reporting	Average Wage (\$/hr)	No. Firms Reporting
Monterey	\$10.08	13	\$9.00	6
Fresno	\$10.03	12	\$7.85	8
Kern	\$9.63	12	\$6.94	6
Tulare	\$8.20	2	\$6.68	2
San Diego	\$10.88	4	\$8	1
<b>Average</b>	<b>\$9.92</b>	<b>43</b>	<b>\$7.87</b>	<b>23</b>

A labor market report published by the State of California Employment Development Department, the *California Agricultural Bulletin*, tracks agricultural employment and wage levels regionally and statewide. This report was used to compare the survey findings to data collected by region by the State of California, which is depicted in Table 10:

**Table 10. California Agricultural Employment Average Hourly Earnings by Region\* and Specialty Crops, June 2003**

<b>Region</b>	<b>Vegetables and Melons</b>	<b>Fruits and Tree Nuts</b>	<b>Ornamental Floral and Nursery</b>
Central Coast (a)	\$9.02	\$8.43	\$8.51
South Coast (b)	\$8.26	\$8.35	\$8.61
San Joaquin (c)	\$8.24	\$8.33	\$8.34
California Average	\$8.54	\$8.37	\$8.56

\*Only those regions of interest to this study are included here; EDD's report also includes the North Coast and Desert Regions.

- (a) Region includes: Alameda, Contra Costa, Monterey, San Benito, San Francisco, San Mateo, Santa Clara and Santa Cruz counties
- (b) Region includes Los Angeles, Orange, San Diego, San Luis Obispo, Santa Barbara, Ventura counties
- (c) Region includes: Alpine, Amador, Calaveras, Fresno, Inyo, Kern, Kings, Madera, Mariposa, Merced, Mono, San Joaquin, Stanislaus, Tulare, Tuolumne

The EDD collects data at the grower level, and does not distinguish between full or part time employment. The survey was conducted monthly, and documented monthly and annual changes in employment levels and wages among agricultural employers. The last published survey available was dated June 2003. On average, the survey data reflected in Table 9 for this project show higher than state and regional averages for full-time wage earners, and lower pay rates than the state and regional averages for part-time workers. The higher cost-of-living areas reflect higher wages in both this study's findings and the state survey.

Respondents were also asked to report salary levels for non-hourly employees. Table 11 reports these findings.

**Table 11. Average Salaries for Non-Hourly Employees in Specialty Crop Agribusinesses**

	<b>Average Annual Salary</b>	<b>Number of Firms Reporting</b>
Monterey	\$50,040	10
Fresno	\$40,642	9
Kern	\$38,500	12
Tulare	\$40,000	1
San Diego	\$42,267	2
<b>Average</b>	<b>\$42,714</b>	<b>34</b>

Fewer respondents provided information regarding salaried employees' compensation. In further studying the data, it appears that smaller firms (less than 100 employees) were less likely to report salaried employees' earnings. This could be due to either confidentiality issues, or because it was difficult for respondents to report an "average" salary figure. Providing respondents with salary ranges on the survey might have allowed them to more easily supply information regarding salaries.

Businesses were also asked to provide annual sales revenue for the commodities they dealt with, as well as total revenues. The data is reported in Table 12.

**Table 12. Annual Revenue Earned by Specialty Crop Producers/Handlers by County**

	<b>Almonds (\$1,000)</b>	<b>Broccoli (\$1,000)</b>	<b>Carrots (\$1,000)</b>	<b>Citrus (<sup>a</sup>) (\$1,000)</b>	<b>Grapes (\$1,000)</b>	<b>Lettuce (<sup>b</sup>) (\$1,000)</b>	<b>Stone Fruit(<sup>c</sup>) (\$1,000)</b>	<b>Nursery (\$1,000)</b>	<b>Strawberries (\$1,000)</b>	<b>Tomatoes (\$1,000)</b>	<b>Other (\$1,000)</b>	<b>Total Revenue (\$1,000)</b>
Monterey	0	\$32,800	0	0	\$700	\$98,116	0	\$10,000	\$5,000	0	\$114,721	\$360,537
Fresno	0	0	0	\$16,394	\$210	0	0	0	0	0	\$26,800	\$115,163
Kern	\$38,600	0	\$305,950	\$12,000	\$76,000	\$3,000	0	0	0	\$3,500	\$34,080	\$448,080
Tulare	0	0	0	\$26,400	24,000	0	\$12,199	0	0	0	\$11,399	\$51,199
San Diego	0	\$117	0	0	0	\$642.5	0	0	\$235	\$532	0	\$5,744
<b>Totals</b>	<b>\$38,600</b>	<b>\$32,917</b>	<b>\$305,950</b>	<b>\$54,794</b>	<b>\$100,910</b>	<b>\$101,759</b>	<b>\$12,199</b>	<b>\$10,000</b>	<b>\$5,235</b>	<b>\$4,032</b>	<b>\$187,000</b>	<b>\$980,723*</b>

\*Vertical Total Revenue column does not equal commodity totals horizontally because several respondents only recorded total revenues, not revenues per commodity.

(a) Includes all citrus reported

(b) Combined for reporting purposes, includes head lettuce and leaf lettuce

(c) Combined for reporting purposes, includes peaches and plums



Given the totals for each commodity as reported in the 2003 county agricultural commissioners reports, the survey respondents represent a small proportion of the total value produced. More research in particular industries, particularly nursery products, tree nuts and stone fruit needs to be conducted in order to capture more employment and revenue information for those important segments of the specialty crop industry. Nonetheless, the values reported from this relatively small sample represent an important segment of the specialty crop industry that can provide further insight with economic impact analysis.

To conduct the economic impact analysis, an economic modeling system known as IMPLAN (IMpact analysis for PLANning) was used. IMPLAN was developed by the U.S. Forest Service to estimate economic input-output models for any county, group of counties or state in the U.S. An input-output model shows the ripple effect of an industry throughout the economy of a county, region, state or country. This is known as the multiplier effect, and estimates the additional economic activity generated by the industry. The greater the interdependence of the industry in the study area, the greater the multiplier effect will be. If an industry has few linkages to other areas of the economy, there will be a large “leakage,” whereby most of the additional economic benefit leaves the study area.

The following description of multiplier effects closely follows Kuminoff, et al. Four measures represent the impact that an industry has on a study area. The first measure is sales impact, which shows how agricultural sales affect revenues in other industries. Next is a measure of personal income produced both directly via employment earnings in the agricultural industry, and indirectly via employment and business income in industries related to agriculture. Value-added is the third measure of economic impact, which links agriculture to the additional value of goods and services sold by businesses or economic sectors, subtracting the costs of inputs and services (but not labor) used to produce those goods. Finally, the number of jobs in agriculture as well as related industries such as processing and inputs, is estimated.

An IMPLAN analysis was run on each of the five counties in this study, using only specialty crop data. Though total agricultural sales in each county would show a much higher impact, the purpose of this study was to try to document the county-level impacts of specialty crops in particular, therefore dairy, cotton and animal feed products were not included in the analysis. The IMPLAN database was adjusted to reflect the 2003 sales values of the top five specialty crops in each of the five counties. The multiplier effects for each county are aggregated because at the processing level, industries for fruits and vegetables are aggregated in the IMPLAN database. The industries of the Tables 13 – 17 show the multiplier effects for the top five specialty crop counties, as well as the economic impact of specialty crops relative to the rest of the counties’ economies. The analysis, which adapts Goldman’s methodology in *The Measure of California Agriculture 2000*, should be interpreted as an estimation of how the counties might be affected if specialty crop production and processing were discontinued and the industry’s inputs were not adapted to another economic use.

**Table 13. Economic Impacts of Monterey County’s Top 5 Specialty Crops: Production and Processing, 2003**

Commodity Group	Direct Sales	Total Sales	Total Income	Total Value Added	Number of Jobs	
	(\$1,000)	(\$1,000)	(\$1,000)	(\$1,000)	Direct	Total
Vegetables	1,322,389	4,551,099	1,402,151	2,457,284	17,623	36,450
Fruit	413,566					
Nursery Products	240,898					
Fruit & Vegetable Processing/Wineries	1,019,793					
Total	2,996,646					
Monterey County Total (agricultural and non-agricultural)	---	---	12,229,940	20,210,964	---	225,098
Specialty Crop Agriculture as Percent of Monterey County Total	---	---	11.5%	12.2%		16.2%

In Monterey County, the number-one specialty crop county in the state, it is evident that the specialty crop portion of agriculture is very important, both at the production and processing levels, particularly with respect to impact on jobs – specialty crops contribute directly and indirectly to 16.2% of Monterey County’s employment, and have considerable impact on total income and the total value added in the county.

The total agricultural industry as a percent of the state’s total economy has been estimated as producing 6.6% of total income and supplying 7.4 % of employment, with fruits and vegetables contributing about half of those impacts to the California economy (Kuminoff, et al.). Taking a closer at the most important specialty crops in a smaller production area allows a better picture of the regional industry to emerge, as in apparent in Monterey County.

Fresno County is the largest overall agricultural county in California and the nation, but it ranks second when only specialty crops are considered. Table 14 shows the results of the Fresno County analysis.

**Table 14. Economic Impacts of Fresno County’s Top 5 Specialty Crops: Production and Processing, 2003**

Commodity Group	Direct Sales	Total Sales	Total Income	Total Value Added	Number of Jobs	
	(\$1,000)				(\$1,000)	(\$1,000)
Fruit	616,191	5,679,694	1,454,528	2,433,632	24,107	53,199
Vegetables	384,290					
Tree Nuts	201,596					
Poultry/Egg	246,520					
Fruit & Vegetable Processing/Wineries	1,415,273					
Poultry/Egg Processing	511,935					
Total	3,375,805					
Fresno County Total (agricultural and non-agricultural)	---	---	17,898,450	19,226,368	---	421,597
Specialty Crop Agriculture as Percent of Fresno County Total	---	---	8.12%	12.7%		12.6%

Fresno County’s specialty crop economic impact places it above the state average for agricultural importance. Three of Fresno’s high production commodities were eliminated from this study: cotton, milk and cattle and calves (primarily dairy animals), so the actual importance of agricultural production and processing depicted here is lower than it would be otherwise. Specialty crops have a very large impact on the sales and employment of the county.

Kern County has one of the most diversified specialty crop economies in the state. The results of the Kern County analysis are presented in Table 15.

**Table 15. Economic Impacts of Kern County’s Top 5 Specialty Crops: Production and Processing, 2003**

Commodity Group	Direct Sales	Total Sales	Total Income	Total Value Added	Number of Jobs	
	(\$1,000)	(\$1,000)	(\$1,000)	(\$1,000)	Direct	Total
Fruit	680,836	2,722,646	825,944	1,364,548	13,524	29,352
Vegetables	269,132					
Tree Nuts	280,504					
Nursery Crops	100,702					
Fruit & Vegetable Processing/Wineries	408,933					
Total	1,740,107					
Kern County Total (agricultural and non-agricultural)	---	---	14,236,090	16,328,794	---	327,430
Specialty Crop Agriculture as Percent of Kern County Total	---	---	5.8%	8.4%		9%

The percentage of total income is from specialty crops is lower in Kern County than the percentage of agricultural income relative to the state’s. This could be attributed to a larger number of lower wage jobs in agriculture as compared to the economy as a whole. The total value added and number of jobs attributed to specialty crops in Kern County is higher than the aggregated impact in the state. However, the lower concentration of specialty crops as compared to Monterey and Fresno is apparent in the smaller economic

impact in Kern County. Kern County also has large dairy, cotton and animal feed industries that are not included in this study.

Table 15 shows the economic importance of specialty crops in Tulare County, which is usually best known for its dairy industry. It has the distinction of being the number-one dairy state in both California and the U.S., but dairy products and animal feeds were not included in Tulare County’s analysis.

**Table 16. Economic Impacts of Tulare County’s Top 5 Specialty Crops: Production and Processing, 2003**

Commodity Group	Direct Sales	Total Sales	Total Income	Total Value Added	Number of Jobs	
					Direct	Total
(Value of Top 5)	(\$1,000)	(\$1,000)	(\$1,000)	(\$1,000)		
Fruit	976,607	2,198,475	678,315	1,100,469	9,057	22,238
Tree Nuts	68,970					
Fruit & Vegetable Processing/Wineries	378,762					
Total	1,424,339					
Tulare County Total (agricultural and non-agricultural)	---	---	7,548,966	7,157,702	---	179,458
Specialty Crop Agriculture as Percent of Tulare County Total	---	---	9%	15.3%		12.4%

It is apparent that specialty crop agriculture is quite important to Tulare County’s economy. According to *The Measure of California Agriculture 2000*, the regional economy of the San Joaquin Valley, which is comprised of Fresno, Kern and Tulare Counties as well as five counties not included in this study, is quite dependent on agriculture. Total agricultural activity in the San Joaquin Valley accounts for about 32% of the total income, 28% of the value added and 37% percent of the employment. This study shows that specialty crops are an important component of the region’s agricultural economy, perhaps equally if not more than dairy

and cotton. The numbers reflected in the above tables depict only a portion of the specialty crop production, as only the sales values for the top five specialty crops were included in the analysis.

The final county under consideration is San Diego, which is better known for its beaches than its agricultural industry. However, San Diego County produces more nursery products, flowers and foliage than any other county in California, and its nursery industry catapults it into the top five, specialty crop rankings for the state. Table 17 shows the economic impact of specialty crops in San Diego County.

**Table 17. Economic Impacts of San Diego County’s Top 5 Specialty Crops: Production and Processing, 2003**

Commodity Group	Direct Sales	Total Sales	Total Income	Total Value Added	Number of Jobs	
					Direct	Total
(Value of Top 5)	(\$1,000)	(\$1,000)	(\$1,000)	(\$1,000)		
Nursery Products	844,638	2,104,419	700,236	1,278,522	4,141	20,977
Fruit Production	146,171					
Fruit & Vegetable Processing	331,470					
Total	1,322,279					
San Diego County Total (agricultural and non-agricultural)	---	---	97,240,730	116,695,450	---	1,788,616
Specialty Crop Agriculture as Percent of San Diego County Total	---	---	0.7%	1.1%		1.2%

The impact of the specialty crop industry is diluted in San Diego County, as one would expect. The large, diverse economy has many other sectors that outweigh agriculture in terms of employment, income and value-added. One factor that should be discussed is that the San Diego County nursery industry is the largest in California, and a large proportion of the product is exported outside of the county. As this study is concerned with the county level impacts, some of the economic benefit of the nursery industry is lost because of the leakage effect to other counties and states.

## **Summary and Conclusions:**

Given the six-month time frame, the main goal of this project was to provide a preliminary view of the economic importance of specialty crops in the counties in which these crops are heavily concentrated. The top five specialty crops were analyzed in each county, in terms of sales, value-added, employment and indirect economic impact on the respective counties as well as on California.

The surveys distributed to the county specialty crop agribusinesses provided a clearer picture of the employment levels, wage and revenues of the specialty crop industry. Further primary research would improve knowledge about these trends, which are typically aggregated into other areas of agriculture in government databases.

From an industry leader or policy standpoint, it is clear that while specialty crops receive very little in terms of federal or state funding, this preliminary study shows that specialty crops are important economic engines in regions in which they are heavily concentrated. It is recommended to extend this research to include the entire specialty crop industry's impact on the state to understand the full economic contribution of this important part of California's agricultural industry.

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