



The Contribution of Agriculture to Northeastern California's Economy in 2014



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Executive Summary

The objective of this study is to document the significance of agricultural production, processing, and its related industries to the overall economy of Northeastern California. Although agriculture has played a major role in shaping the landscape and stimulating economic growth in Northeastern California, no other studies have focused exclusively on this region of California. While agriculture contributes to the economy through numerous direct agricultural activities, it also plays an important role through its interactions with other economic sectors. This report addresses all of these impacts in order to show the true value of agriculture in this region.



Key Findings Include:

- The unemployment rate in Northeastern CA was 10.3% in 2014, this is 2.8% higher than the state and 4.1% higher than the U.S.
- Inflation adjusted per capita personal income has been increasing at a faster rate between 2004 and 2014 in Northeastern CA than the state as a whole (12.2% versus 7.1%).
- The total value of agricultural production was over \$4.5 Billion (\$4,544M) in 2014, it has more than doubled since 2004 (113% increase).
- Colusa County had the highest value of production in 2014 (\$876M).
- The highest valued commodities in Northeastern CA were walnuts (\$958.7M), almonds (\$795.3M), and rice (\$719.8M).
- The highest valued commodities in the mountain dominant counties were strawberry plants (\$146.1M), timber (\$125.5M), and cattle (\$106.8M).
- Farm production expenses have more than doubled (103% increase) between 2004 and 2014.
- Net farm income has more than tripled (206% increase) from 2004 to 2014 while total government payments have decreased by 68%.
- Agriculture was responsible for creating 64,246 jobs in Northeastern CA in 2014 (17.3% of all jobs and 21% of all private sector jobs). This includes 42,694 jobs directly in agriculture and an additional 21,551 jobs created through multiplier (indirect and induced) effects.
- Agriculture is responsible for creating \$3,151M in labor income in Northeastern CA in 2014 (18.2% of all labor income).
- Agriculture is responsible for creating \$6,095M in total value added to the Northeastern CA Economy in 2014 (21% of the total value added or approximately \$.21 of every dollar created by the Northeastern CA economy is associated with agriculture).
- At the statewide level, the overall contribution of agriculture in 2014 was estimated at approximately 1.6 million jobs (7.5% of state total), \$97.4 B in labor income (6.9% of state total), and \$163.4 B in total value added (7.1% of state total).

Section 1

Overview of Northeastern California



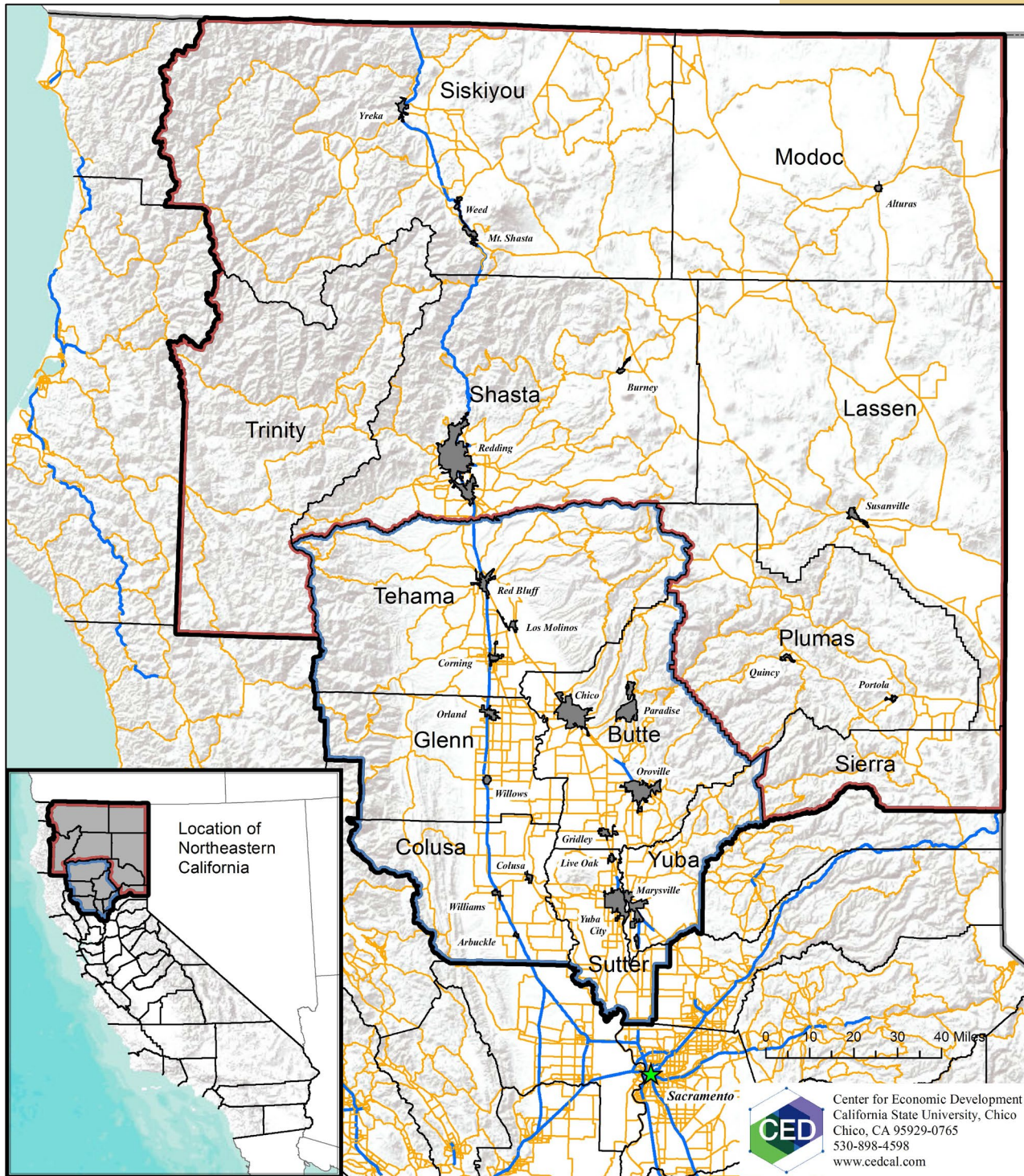
1.1 Study Area

Northeastern California is a diverse part of the state with large variations in terrain, weather, and land use. There are large, highly productive valleys that are near sea level and mountains that reach above 14,000 feet. Much of Northeastern California has been developed around the Sacramento River which is the state's largest river.

For the purposes of this study, "Northeastern" California is defined as the region containing the following 13 counties: Butte, Colusa, Glenn,

Lassen, Modoc, Plumas, Shasta, Sierra, Siskiyou, Sutter, Tehama, Trinity and Yuba (See Figure 1). Because of the diversity of agriculture within this vast region, it can be difficult to summarize and describe the industry. As such, the Northeastern California region will occasionally be subdivided into six Valley Dominant Counties (Butte, Colusa, Glenn, Tehama, Sutter and Yuba) and seven Mountain Dominant Counties (Lassen, Modoc, Plumas, Shasta, Sierra, Siskiyou and Trinity).

Figure 1: Northeastern California Agriculture Profile Study Area Map



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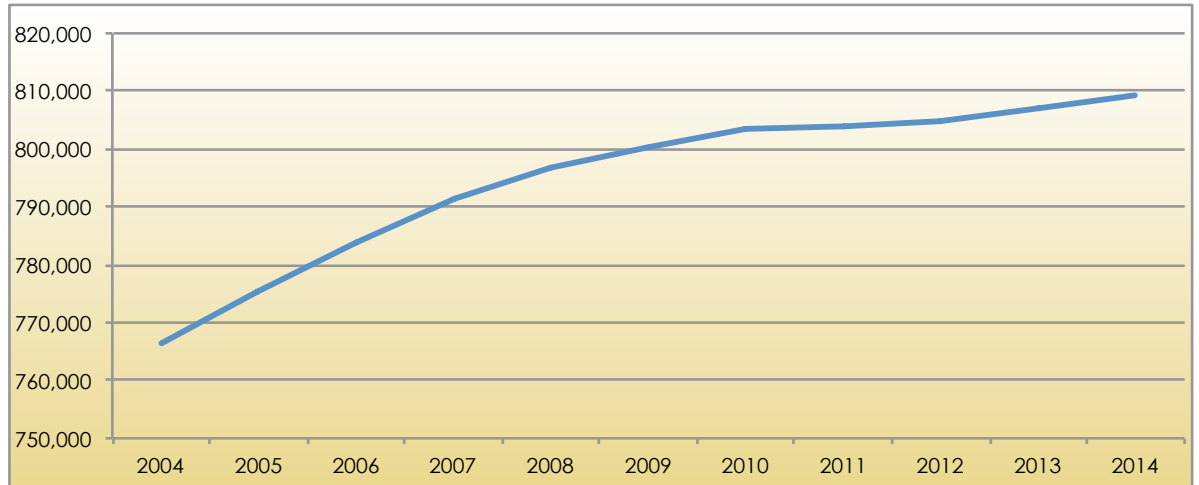


- Urban Areas > 2,500 Pop
- Sacramento Valley Dominant Counties
- Mountain Valley Dominant Counties
- 13-County Study Area
- County Boundaries
- State Boundaries
- Freeways
- Major Roads

1.2 Demographics

The total population in Northeastern California had been steadily increasing between 2004 and 2010 (4.9% increase). The population levelled off between 2010 and 2012 and has begun increasing again to 809,347 in 2014 (Figure 2). The levelling off was likely in response to the economic decline that was experienced nationally during the 2007-2009 recession and the region is once again experiencing population growth as the economy continues to improve.

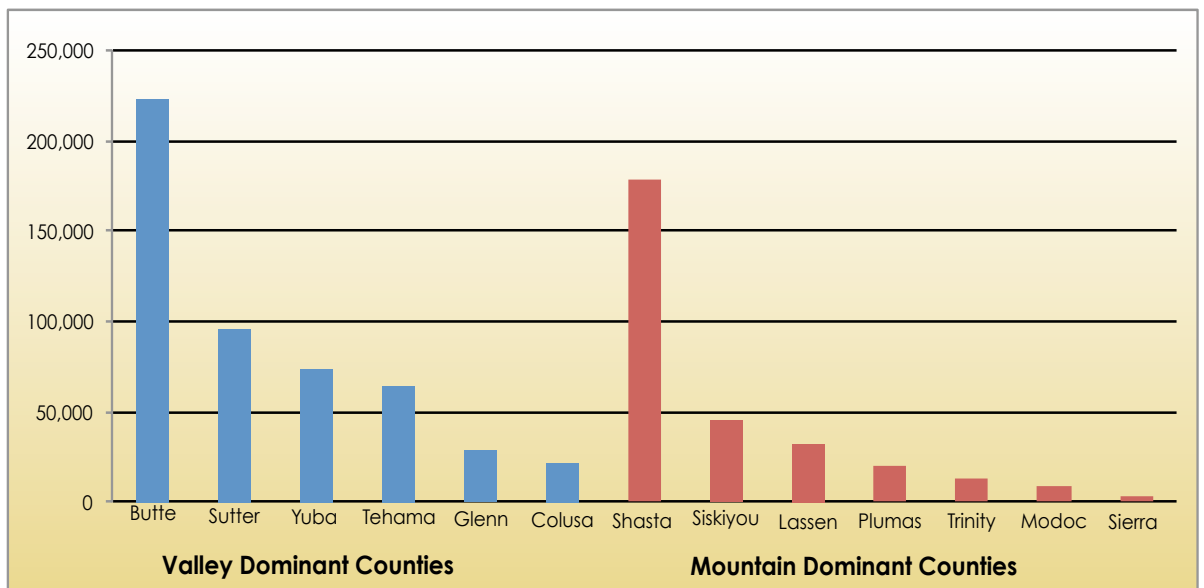
Figure 2: Northeastern California Population (2004-2014)



Source: California Department of Finance

The population in the valley dominant counties is much larger than that in the mountain dominant counties (63% compared to 37%). However, Figure 3 shows how both the valley and mountain dominant regions have a single county that provides the majority of its population base (Butte County in the valley and Shasta in the mountain). Although the counties in the mountain dominated region tend to be much larger in land area when compared to the state average, this region contains 3 of the 5 least populated counties in the entire state (Sierra, Modoc, and Trinity).

Figure 3: Northeastern California Population by County (2014)

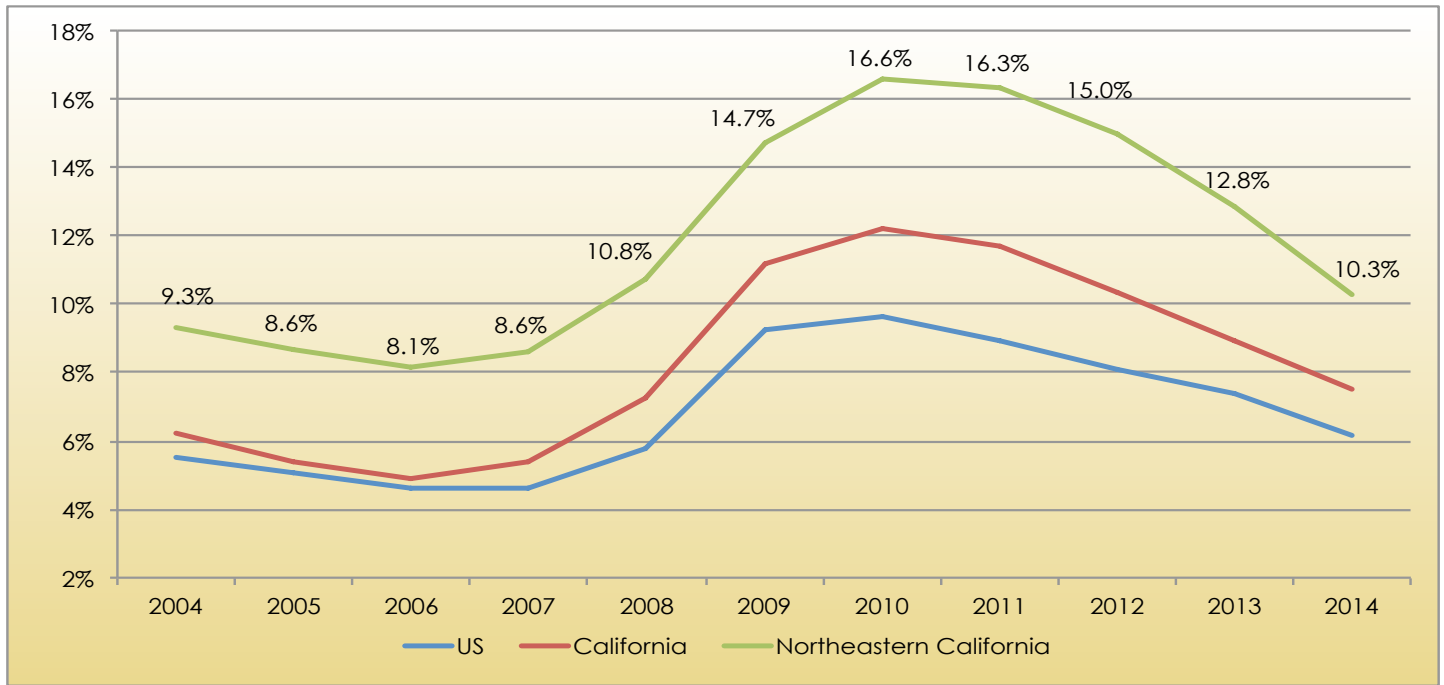


Source: California Department of Finance

Unemployment rates in Northeastern California have followed a similar path as those of the state and nation (Figure 4). However, the region's unemployment is significantly higher than both the state and national averages (2.8% higher than the state and 4.1% higher than the U.S. in 2014). Unemployment rates in the valley and mountain regions are much more similar to each other (typically within 1%), but the mountain dominant

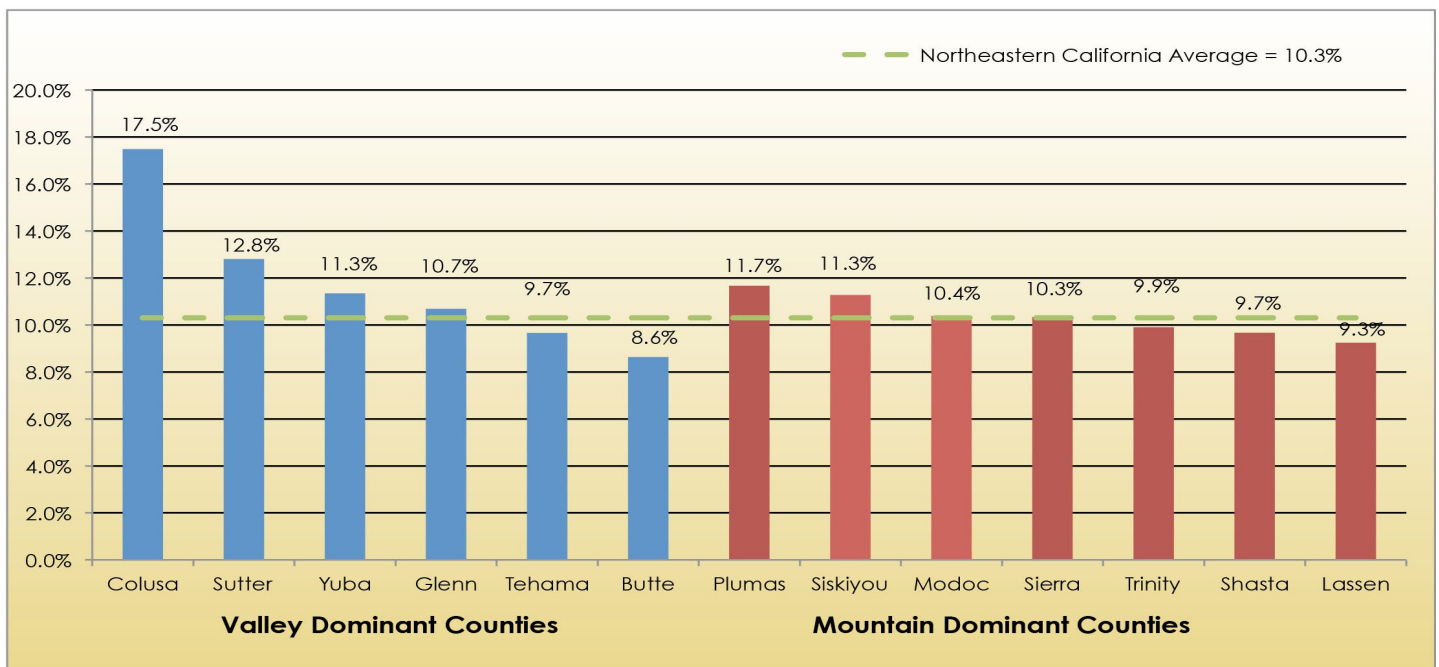
counties tend to be slightly lower. Figure 5 shows Colusa County having the highest unemployment rate in the study area (17.5%) and Butte County having the lowest (8.6%). Although rates are declining in Northeastern California, they are still quite elevated and the region appears to be lagging behind the rest of the country and state as we recover from the recession that ended in 2009.

Figure 4: Unemployment Rates (2004-2014)



Source: California Employment Department, Labor Market Information Division

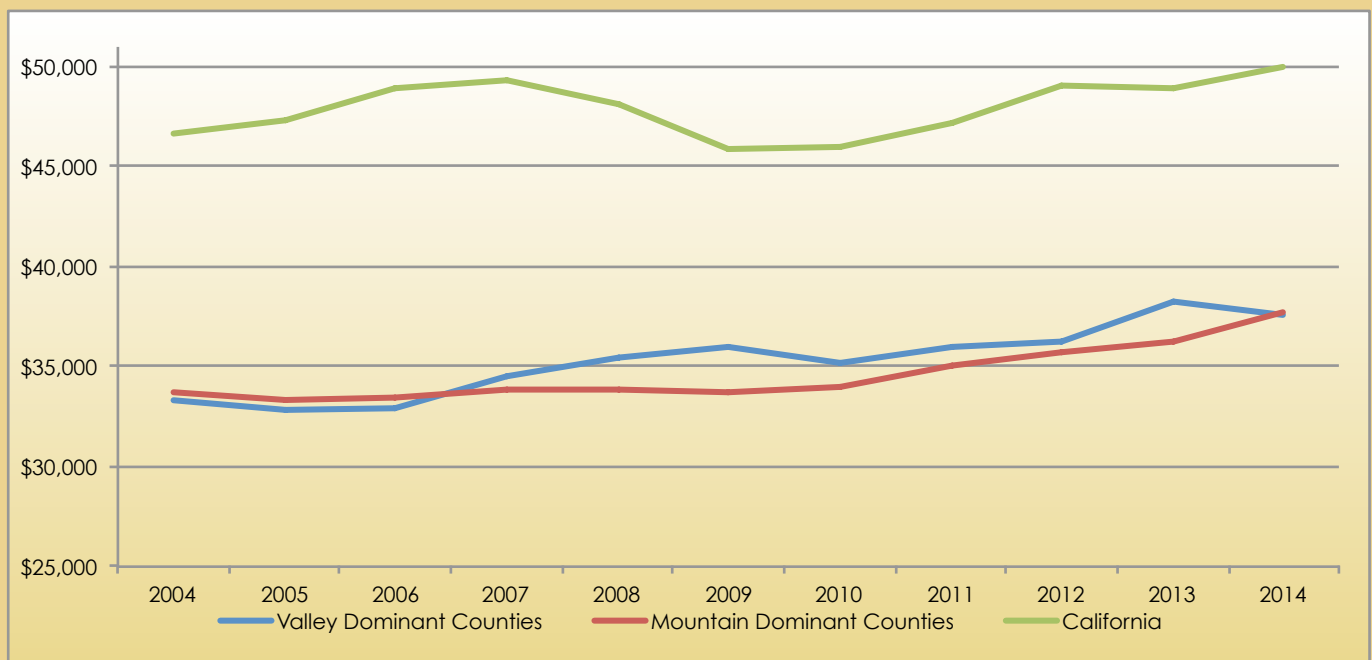
Figure 5: Unemployment Rate by County (2014)



Inflation adjusted (real) per capita personal income has increased by 12.2% in the region between 2004 and 2014. Both the mountain and valley dominant counties have experienced similar growth rates, while the state only experienced a 7.1% increase. Although the state average is approximately \$12,000 dollars higher than that of Northeastern California, the region benefits from a lower cost of living. The average California per capita personal income experienced a sharp decline after the country's financial crisis in 2007. However, per capita income in both the valley and mountain dominant counties didn't decrease during this period. In fact, the valley dominant counties

experienced some of its highest rates of growth during the period when the state experienced its biggest declines. One of the biggest differences between Northeastern California and the rest of California is that agriculture plays a more significant role in Northeastern California's overall economy (see Section 3). As such, it is believed that the success of the agricultural industry is one of the things that prevented a decline in per capita income during this period. Although Northeastern California is experiencing higher rates of unemployment and below average income, a strong agricultural industry is critical to the overall success of our region's economy.

Figure 6: Inflation Adjusted Per Capita Personal Income (2004-2014)

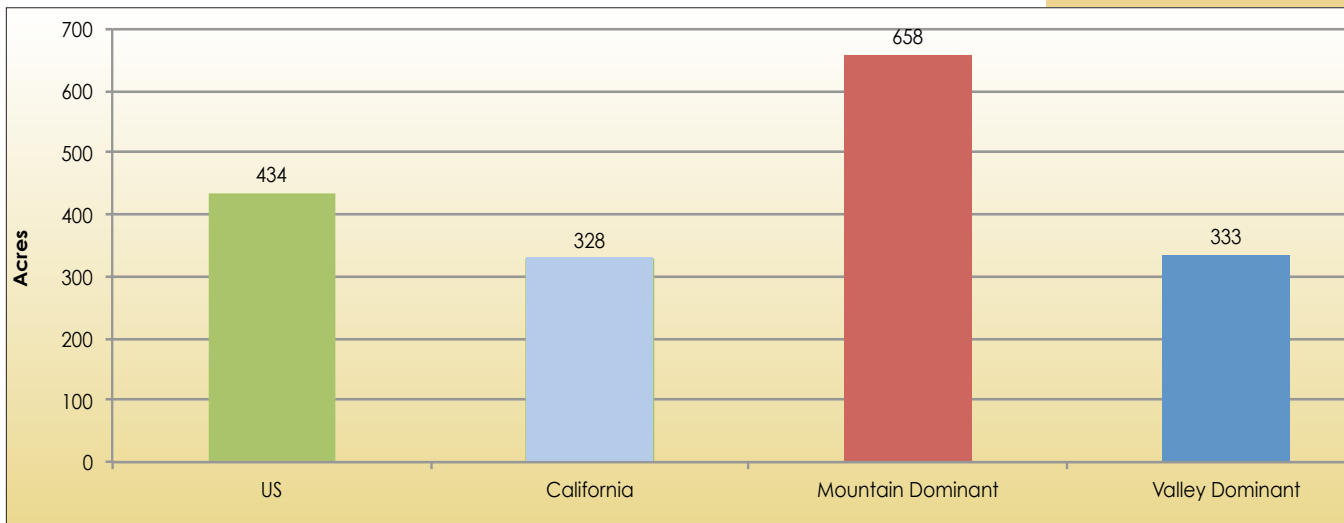


Source: U.S. Bureau of Economic Analysis Regional Economic Profiles (CA30) and California Department of Finance.

1.3 Land Use and Farms

According to the California Agricultural Statistics, Northeastern California had approximately 5.6 million acres of land in agricultural production in 2014. Approximately 2.9 million acres (52%) was in the valley dominant counties and approximately 2.7 million acres (48%) was in the mountain dominant counties. Most of the cropland is located in the valley dominant counties with grazing becoming more common as we move into the foothills and mountains. However, cropland is also found in several mountain valleys that are spread out across the higher elevations. According to the 2012 USDA Census of Agriculture, there were 8,045 farms in the valley dominant counties and 3,794 farms within the mountain dominant counties. However, the average farm size in the mountain dominant counties was approximately twice as large as the valley dominant farms (Figure 7). The typical farm in the mountain dominant counties is over a square mile in size due to large amounts of land for livestock. In the valley dominant counties you have a warmer climate, deep, nutrient rich soils that are well suited for fruit/nut production along with clay and poorly draining soils for rice production. Valley dominant counties are typically able to produce more value with less land because of the higher profit margins that can often be available for fruit, nut, and rice crops.

Figure 7: Average Farm Size (2012)



Source: USDA 2012 Census of Agriculture

Section 2

Agricultural Production, Expenses and Net Farm Income

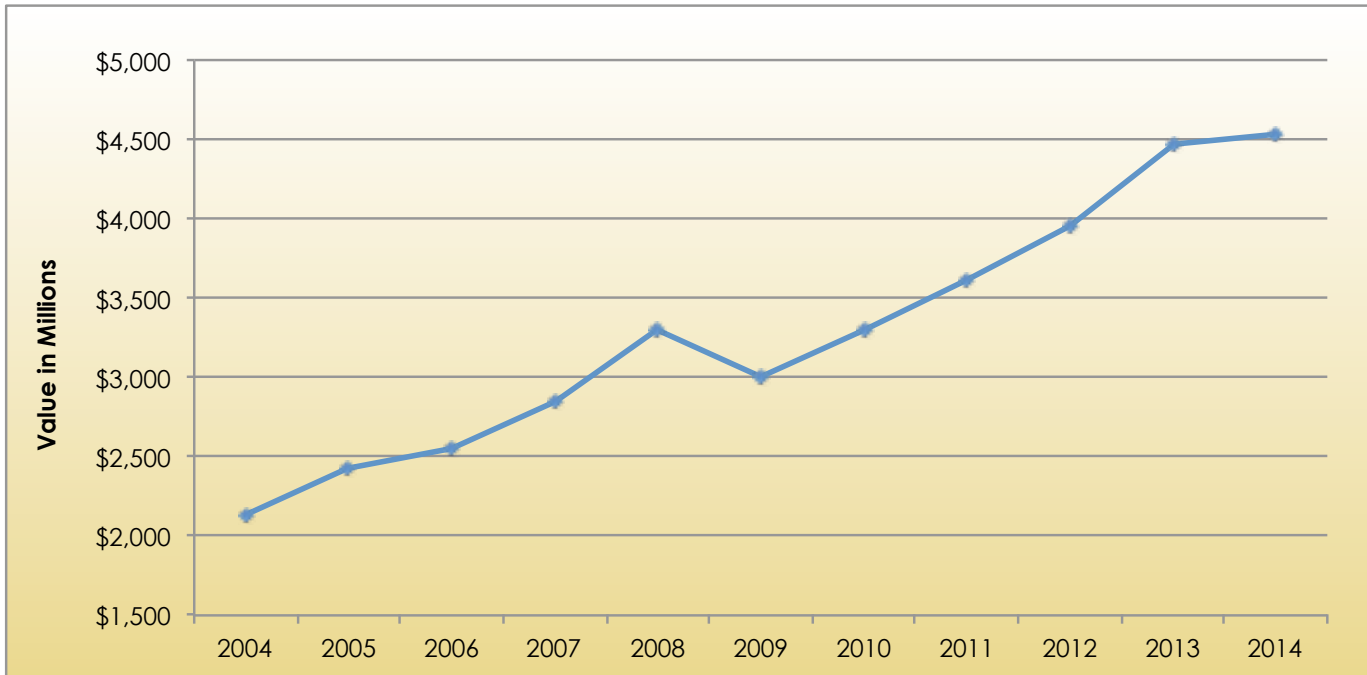


2.1 Total Value of Agricultural Production

The total value of agricultural production in Northeastern California has generally been increasing (Figure 8). In 2014, the total value of agricultural production was just over \$4.5 Billion (\$4,544 million). This is over twice as much value than was produced in 2004 (113% increase) and reflects an increase from last year (1.7% increase). As such, this is the highest level of production that has ever occurred in the region. These production estimates only include timber for Modoc and Trinity County since these counties have not provided updated crop reports for several years. The peak that previously occurred in 2008 corresponded with a dramatic increase in world food prices that lasted until the 2nd quarter of 2008. Between January 2002 and June 2008, the

monthly food commodity price index compiled by the International Monetary Fund increased by 130%, over the following 6 months the index dropped by a third. However, world food prices began increasing again in 2010 and by January 2011 the monthly food commodity price index had exceeded the previous peak in 2008. The food commodity index has stayed relatively high through most of 2014, but has been steadily declining ever since the 3rd quarter of 2014. With increasing levels of production and relatively high commodity prices, agricultural production in Northeastern California was quite strong in 2014. It will be interesting to see if the combination of drought and lower world food prices will result in a decrease in the value of production for 2015.

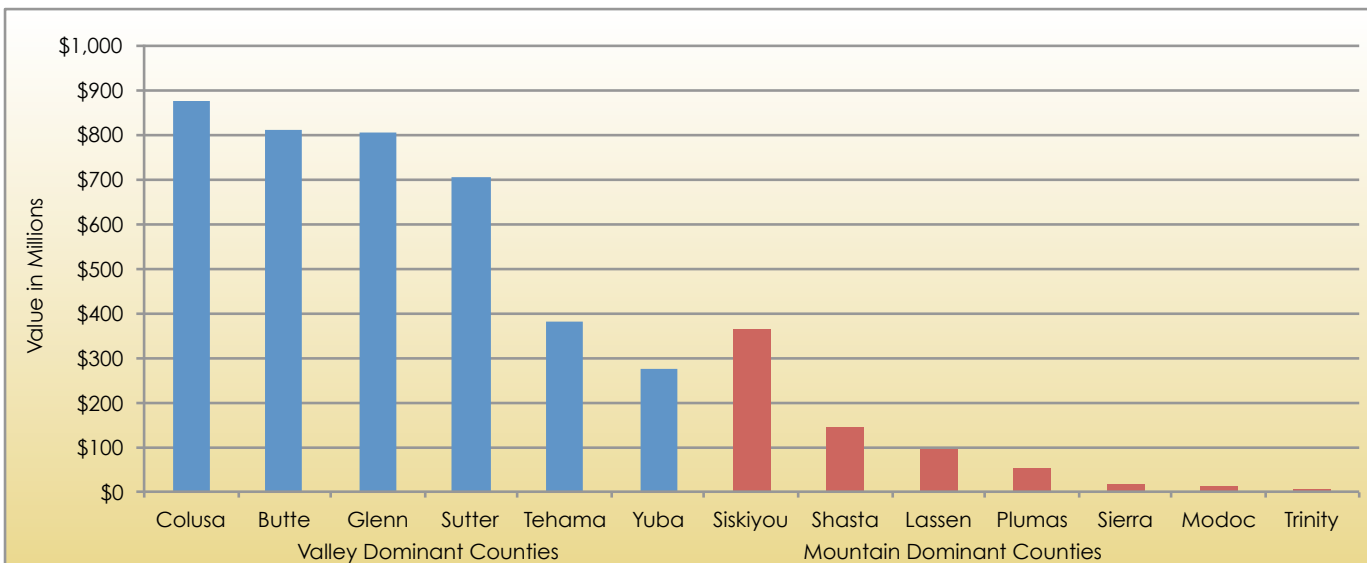
Figure 8: Total Value of Agricultural Production in Northeastern California (2004-2014)



Source: California Agricultural Statistics 2014

The value of agricultural production is not distributed evenly between the valley and mountain regions. 85% of the total value of production in 2014 occurred in the valley dominant counties, while only 15% occurred in the mountain dominant counties even though these regions have a similar amount of acres in production. Colusa County continued to have the highest value of production in 2014 (Butte County was the highest in 2012), followed by Butte and Glenn counties with Modoc and Trinity counties documenting the lowest production values (Figure 9).

Figure 9: Northeastern California Agricultural Production by County (2014)



Source: California Agricultural Statistics 2014

Table 1: Northeastern California Top 10 Commodities by Value (2014)

Northeastern California Top 10 Commodities by Value	Total Value	Total Acres
Walnuts	\$958,652,000	154,330
Almonds	\$795,255,000	150,187
Rice	\$719,846,000	377,000
Cattle	\$249,934,000	N/A
Plums, Dried	\$243,444,000	46,086
Harvested Timber	\$147,315,000	N/A
Nursery Plants, Strawberry	\$146,108,000	3,800
Hay, Alfalfa	\$140,274,000	111,908
Tomatoes, Processing	\$112,737,000	25,700
Peaches, Clingstone	\$103,221,000	13,180
64 Remaining Commodities	\$927,449,970	4,754,768
Total	\$4,544,235,970	5,636,959

Source: California Agricultural Statistics 2013

Agriculture throughout the study region is diverse, with over 70 different commodities being reported. The highest valued commodity in the Northeastern California region was Walnuts in 2014 with a total value of \$958.7 million, followed by Almonds and Rice (Table 1). Although Rice was the highest valued crop in 2013, it appears that the drought was responsible for reducing acreage by 110,900 and the value of rice production has fallen by \$184 million since last year.

Since the valley dominant counties contain the majority of agricultural production, the top ten commodities in the valley dominant counties (Walnuts, Almonds, Rice,

etc.) looks very similar to the entire Northeastern California region (Table 2). However, agricultural production in the mountain dominant counties looks very different. The highest valued commodities in the mountain dominant counties include Strawberry Plants, Timber, Cattle, and Hay (Table 3). Although Rice, Walnuts, and Almonds make up approximately 54% of the total value of production in the Northeastern California region, the diversity of the valley and mountain regions helps the overall economy to be more resilient to individual commodity price fluctuations.

Tables 2 & 3: Valley and Mountain Dominant Counties Top 10 Commodities by Value (2014)

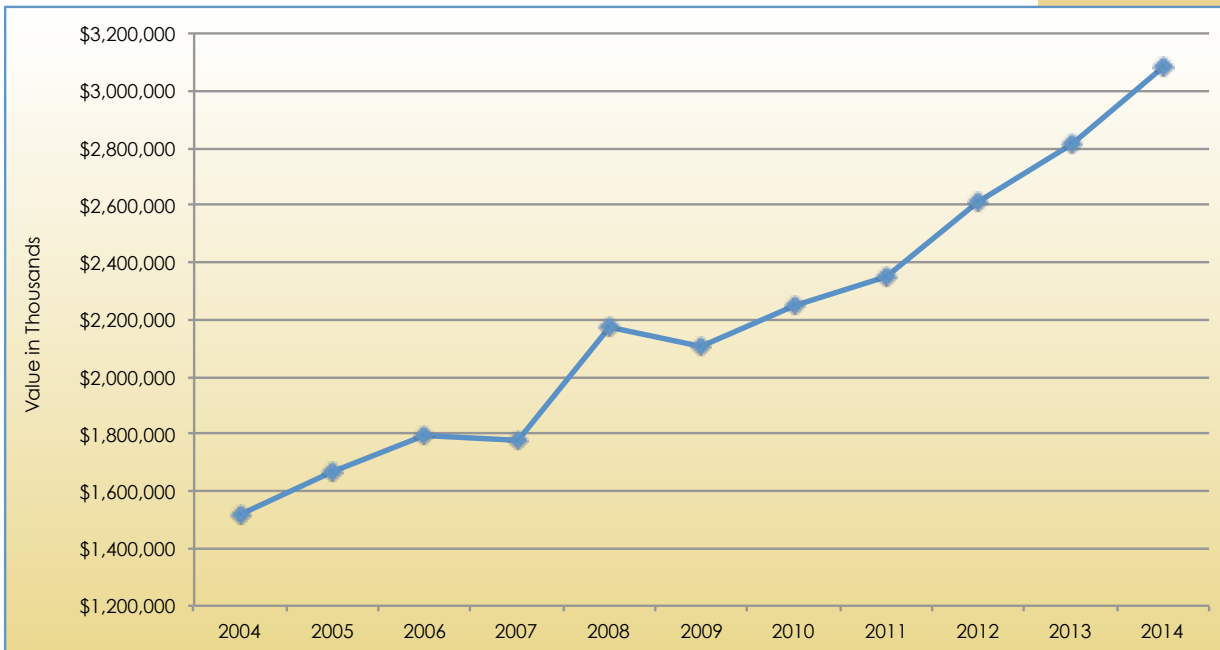
Valley Dominant Top 10 Commodities by Value	Total Value	Total Acres	Mountain Dominant Top 10 Commodities by Value	Total Value	Total Acres
Walnuts	\$952,211,000	153,200	Nursery Plants, Strawberry	\$146,108,000	3,800
Almonds	\$795,255,000	150,187	Harvested Timber	\$125,526,000	N/A
Rice	\$719,846,000	377,000	Cattle	\$106,765,000	N/A
Plums, Dried	\$243,444,000	46,086	Hay, Alfalfa	\$97,025,000	82,900
Cattle	\$143,169,000	N/A	Hay, Other, Unspecified	\$50,502,000	61,100
Tomatoes, Processing	\$112,737,000	25,700	Pasture, Irrigated	\$21,726,000	170,400
Peaches, Clingstone	\$103,221,000	13,180	Forest Products	\$16,218,000	N/A
Milk, Market, Fluid	\$98,074,000	N/A	Wheat, All	\$15,898,000	19,580
Olives	\$63,797,000	22,420	Nursery Products, Misc.	\$14,380,000	N/A
Apiary, Pollenation Fees	\$45,194,000	N/A	Potatoes, All	\$12,726,000	4,420
53 Remaining Commodities	\$579,405,500	2,133,617	34 Remaining Commodities	\$81,008,070	2,373,369
Total	\$3,856,353,500	2,921,390	Total	\$687,882,470	2,715,579

Source: California Agricultural Statistics 2014

2.2 Farm Expenses and Net Farm Income

The total value of agricultural production is significant, but it is also important to look at what is happening to farm expenses and net farm income. Total farm production expenses in Northeastern California are shown in Figure 10. Although Figure 8 showed a significant increase in the total value of agricultural production, Figure 10 shows farm production expenses are increasing as well. Overall, farm production expenses have more than doubled (increased 103%) between 2004 and 2014.

Figure 10: Northeastern California Farm Production Expenses (2004-2014)

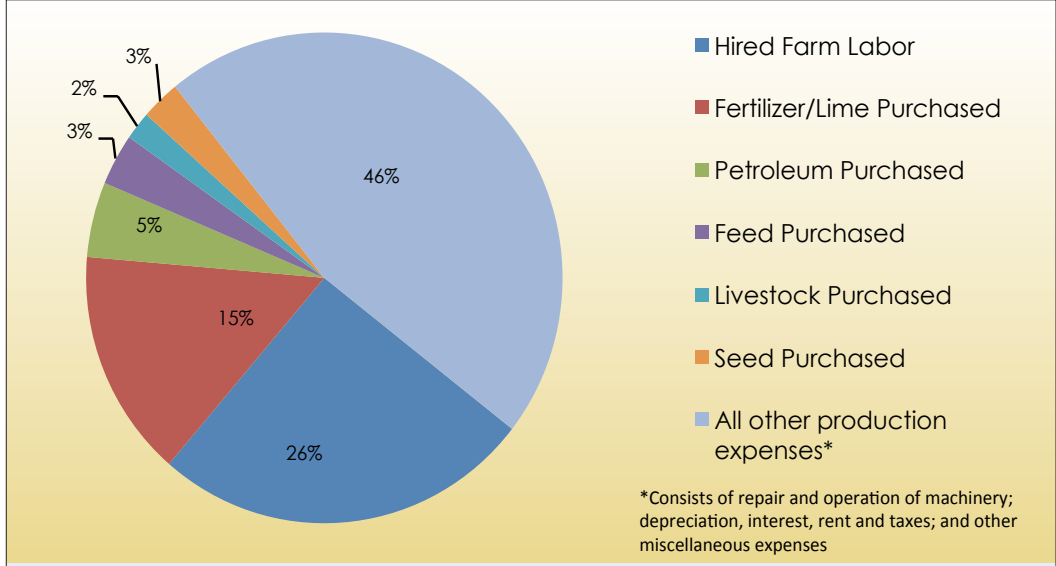


Source: Bureau of Economic Analysis Farm Income and Expenses (CA45)



The distribution of farm production expenses can be seen in Figure 11. The largest portion of farm production expenses is “All other production expenses” which includes the repair and operation of machinery, depreciation, interest, rent and taxes, and all other miscellaneous expenses. These expenses are largely driven by how capital intensive farming has become in the region. The next three largest categories of farm production expense are Hired Farm Labor (26%), Fertilizer/Lime Purchased (15%), and Petroleum Purchased (5%).

Figure 11: Distribution of Northeastern California Farm Production Expenses (2014)

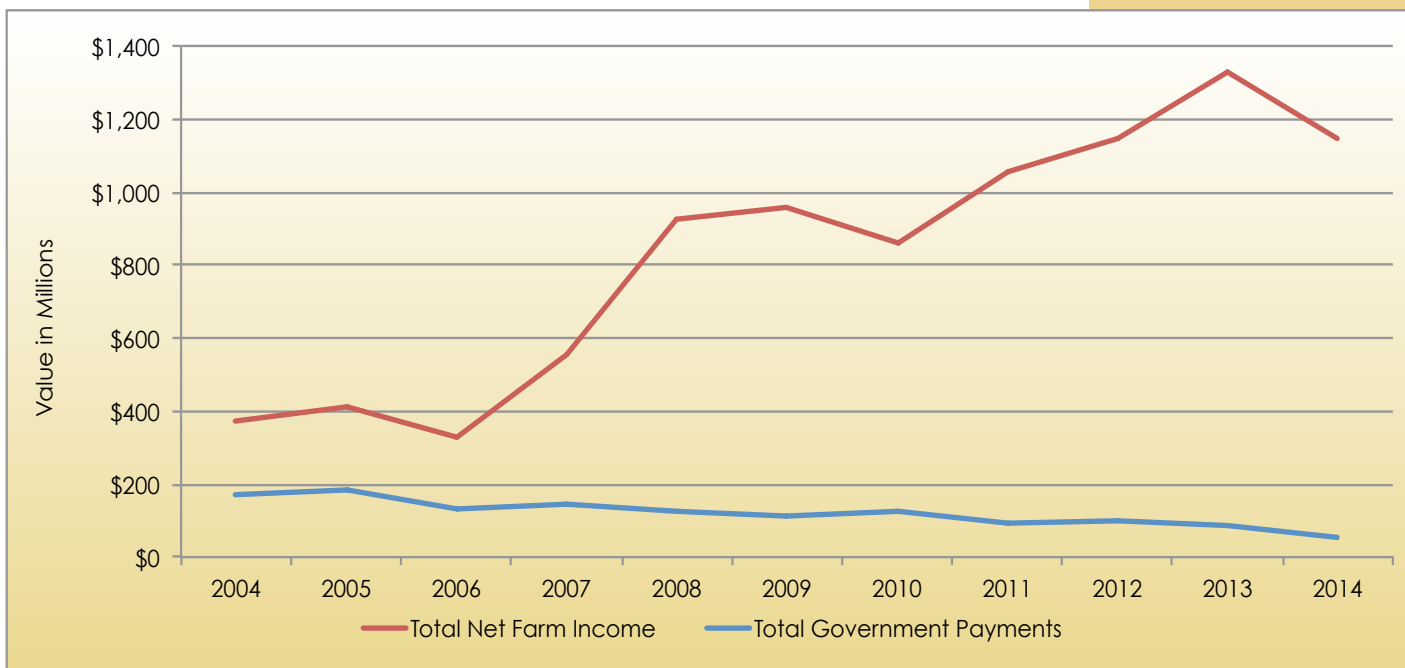


Source: Bureau of Economic Analysis Farm Income and Expenses (CA45)



The value of agricultural production has generally been growing at a faster rate than production expenses and the region has been experiencing an overall increase in net farm income (revenues minus expenses). Figure 12 shows how net farm income has more than tripled (206% increase) from 2004 to 2014 while total government payments have decreased by approximately 68%. However, the decline in net income between 2013 and 2014 is somewhat unexpected since the total value of output reached record levels in 2014. Several factors may have contributed to this, including higher land prices/rents, increased production expenses, and both higher costs and reduced output due to drought. Because of different methods of accounting, the net farm income estimated by the BEA is not exactly equal to the difference between the total value of farm production reported in the county crop reports minus the total farm expenses reported by the BEA.

Figure 12: Northeastern California Net Farm Income and Government Payments (2004-2014)



Source: Bureau of Economic Analysis Farm Income and Expenses (CA45)

Section 3

Total Economic Contribution of Agriculture



3.1 Introduction

Agriculture is more than just the value of farm production, it also includes the industries that support agricultural production and various types of processing. In addition, the total economic contribution of agriculture is more than just the direct impact of these activities. To measure agriculture's total economic contribution, the indirect and induced impacts of agriculture must also be taken into account. Indirect impacts occur when agricultural sectors purchase goods and services from other related sectors of the

economy. For example, agricultural production will likely have indirect impacts on related sectors like farm equipment and fertilizer sales. Induced impacts measure the effect of personal consumption expenditures by households that receive income from agriculture. Induced impacts will capture the regional benefits of spending agricultural income on a variety of other economic sectors like home improvements, medical services, retail establishments, etc.

3.2 Methods

The total economic contribution of agriculture was modeled using the Impact Analysis for Planning (IMPLAN) System (IMPLAN Group, 2016). IMPLAN is a computer package that is used to construct regional economic input-output (I-O) models. Input-output analysis uses a mathematical modeling approach to capture the relationships between various sectors of an economy. The IMPLAN model uses 536 different sectors that are based on the Bureau of Economic Analysis's (BEA) national Input-Output study. These economic sectors are similar to those identified by the 6-digit North American Industry Classification System (NAICS). Following a similar approach that was used by English, Popp, and Miller (2013), the 536 sectors in IMPLAN were used to define an overall "Agriculture" industry that was made up of three categories of agriculture: Agricultural Production Industries, Agricultural Processing Industries, and Agricultural Related Industries (See Appendix A, Table A.1 for specific sectors included in each category). It is important to recognize that agricultural retail (restaurants, grocery stores, etc.) is not included as a direct component of the overall "Agriculture" industry, although some of this activity is captured in the indirect and induced effects.

The Direct Impacts for each agricultural category (Production, Processing, and Related) and the Indirect and Induced Impacts for the entire Agriculture Industry is reported in terms of Employment, Labor Income, and Value Added. Employment is presented as the number of wage and salary employees, as well as self-employed jobs. Labor Income consists of proprietary income (income received by self-employed individuals including private business owners and owner-operators) and wages (includes all worker salaries, payments, and fringe benefits paid by employers). Value Added represents all labor income plus indirect taxes and other property-type income, such as payments for rents, royalties, and dividends. The Total Value Added for the study area is comparable to Gross Regional Product (GRP). Economists generally prefer using value added as the measure for assessing the contribution of a given industry to a

region's economy since the total value of output can be misleading (Olson and Lindall). The total value of output represents the dollar value of an industry's production and can result in double counting when production, processing, and agricultural related sectors have been included. For example, including both the total value of rice output from farm production and the total value of processed rice cakes would result in double counting of the rice output value (once as a farm output and again as a processed output). Rather we should only look at the value added by the rice producer and the value added to the rice by the processor to provide a better estimate of the total economic contribution of the activity.



3.3 Results

The agricultural industry is making significant contributions to the economy in terms of employment, wages and value added (Table 4). The overall agriculture industry, including indirect and induced effects, is responsible for an estimated 64,246 jobs or 17.3% of total employment in the region (21% of total private sector employment). That is, nearly one in five jobs in the region is attributed to agriculture. This includes 42,694 jobs directly within agricultural production, processing, and related sectors and an additional 21,551 jobs through the indirect and induced effects. The total value of labor income as a result of the overall agriculture industry was estimated at \$3.2 billion, or 18.2% of all labor income in the region. In terms of total value added, \$6.1 billion was added to the Northeastern California economy as a result of the direct, indirect, and induced effects of the agricultural industry. This represents 21% of all economic value that was created by the Northeastern California economy in 2014.

The techniques that were used in this report to estimate the economic contribution of agriculture in Northeastern California were also applied to the state as a whole (See Appendix B, Table B.1 for detailed results). The total contribution of agriculture to the entire state of California was estimated to approximately 1.6 million jobs (7.5% of state total), \$97.4 B in labor income (6.9% of state total), and \$163.4 B in total value added (7.1% of state total) in 2014. These results are similar in magnitude in terms of employment and labor income to a previous report from the University of California (UC) Agricultural Issues Center (AIC). However, the current study shows California Agriculture contributing to a much larger portion of the overall state economy when including multiplier effects. Relative to the state as a whole, the economy of Northeastern California is significantly more dependent upon agriculture in terms of employment, labor income, and value added.

Table 4: The Contribution of Agriculture to Northeastern California’s Economy in 2014

	Employment		Labor Income		Value Added	
	# Jobs ¹	% NE CA jobs ²	\$ (in millions)	% NE CA Labor Income ³	\$ (in millions)	% NE CA Value Added ⁴
Production ⁵	26,178	7.1%	\$1,469	8.5%	\$3,239	11.1%
Processing ⁵	10,114	2.7%	\$519	3.0%	\$912	3.1%
Ag Related ⁵	6,402	1.7%	\$310	1.8%	\$424	1.5%
Direct Impacts	42,694	11.5%	\$2,299	13.3%	\$4,574	15.7%
Indirect Impacts	8,403	2.3%	\$369	2.1%	\$625	2.1%
Induced Impacts	13,148	3.5%	\$484	2.8%	\$896	3.1%
Total Contribution of Agriculture	64,246	17.3%	\$3,151	18.2%	\$6,095	21.0%

¹ Includes full-time and part-time jobs.

² Total number of jobs in Northeastern (NE) California estimated at 370,868.

³ Total labor income in Northeastern (NE) California estimated at \$17,289 M.

⁴ Total value added in Northeastern (NE) California estimated at \$29,092 M.

⁵ Appendix A, Table A.1 defines economic sections for each category.

Section 4

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Appendix A: Description of IMPLAN Sectors

Table A.1: IMPLAN Sectors Defining Agricultural Production, Processing, and Related Industries. Sectors identified in bold are active within the northeastern California economy.

Category	IMPLAN Sector	IMPLAN Sector Title	Category	IMPLAN Sector	IMPLAN Sector Title
Agricultural Production Industries	1	Oilseed farming	Agricultural Processing Industries (Continued)	110	Distilleries
	2	Grain farming		111	Tobacco product manufacturing
	3	Vegetable and melon farming		112	Fiber, yarn, and thread mills
	4	Fruit farming		113	Broadwoven fabric mills
	5	Tree nut farming		114	Narrow fabric mills and schiffli machine embroidery
	6	Greenhouse, nursery, and floriculture production		115	Nonwoven fabric mills
	7	Tobacco farming		116	Knit fabric mills
	8	Cotton farming		117	Textile and fabric finishing mills
	9	Sugarcane and sugar beet farming		118	Fabric coating mills
	10	All other crop farming		119	Carpet and rug mills
	11	Beef cattle ranching and farming		120	Curtain and linen mills
	12	Dairy cattle and milk production		121	Textile bag and canvas mills
	13	Poultry and egg production		122	Rope, cordage, twine, tire cord and tire fabric mills
	14	Animal production, except cattle, poultry, and eggs		123	Other textile product mills
	15	Forestry, forest products, & timber tract production		124	Hosiery and sock mills
	16	Commercial logging		125	Other apparel knitting mills
	17	Commercial fishing		126	Cut and sew apparel contractors
	18	Commercial hunting and trapping		127	Mens and boys cut and sew apparel manufacturing
Agricultural Processing Industries	65	Dog and cat food manufacturing	128	Womens and girls cut and sew apparel mfg.	
	66	Other animal food manufacturing	129	Other cut and sew apparel manufacturing	
	67	Flour milling	130	Apparel accessories and other apparel manufacturing	
	68	Rice milling	131	Leather and hide tanning and finishing	
	69	Malt manufacturing	132	Footwear manufacturing	
	70	Wet corn milling	133	Other leather and allied product manufacturing	
	71	Soybean and other oilseed processing	134	Sawmills	
	72	Fats and oils refining and blending	135	Wood preservation	
	73	Breakfast cereal manufacturing	136	Veneer and plywood manufacturing	
	74	Beet sugar manufacturing	137	Engineered wood member and truss manufacturing	
	75	Sugar cane mills and refining	138	Reconstituted wood product manufacturing	
	76	Nonchocolate confectionery manufacturing	139	Wood windows and door manufacturing	
	77	Chocolate & confectionery mfg. from cacao beans	140	Cut stock, resawing lumber, and planing	
	78	Confectionery mfg. from purchased chocolate	141	Other millwork, including flooring	
	79	Frozen fruits, juices and vegetables manufacturing	142	Wood container and pallet manufacturing	
	80	Frozen specialties manufacturing	143	Manufactured home (mobile home) manufacturing	
	81	Canned fruits and vegetables manufacturing	144	Prefabricated wood building manufacturing	
	82	Canned specialties	145	All other miscellaneous wood product manufacturing	
	83	Dehydrated food products manufacturing	146	Pulp mills	
	84	Fluid milk manufacturing	147	Paper mills	
	85	Creamery butter manufacturing	148	Paperboard mills	
	86	Cheese manufacturing	149	Paperboard container manufacturing	
	87	Dry, condensed, & evaporated dairy product mfg.	150	Paper bag and coated and treated paper mfg.	
	88	Ice cream and frozen dessert manufacturing	151	Stationery product manufacturing	
	89	Animal, except poultry, slaughtering	152	Sanitary paper product manufacturing	
	90	Meat processed from carcasses	153	All other converted paper product manufacturing	
	91	Rendering and meat byproduct processing	368	Wood kitchen cabinet and countertop mfg.	
	92	Poultry processing	369	Upholstered household furniture manufacturing	
	93	Seafood product preparation and packaging	370	Nonupholstered wood household furniture mfg.	
	94	Bread and bakery product, except frozen, mfg.	373	Wood office furniture manufacturing	
	95	Frozen cakes and other pastries manufacturing	374	Custom architectural woodwork and millwork	
	96	Cookie and cracker manufacturing	19	Support activities for agriculture and forestry	
	97	Dry pasta, mixes, and dough manufacturing	169	Nitrogenous fertilizer manufacturing	
	98	Tortilla manufacturing	170	Phosphatic fertilizer manufacturing	
99	Roasted nuts and peanut butter manufacturing	171	Fertilizer mixing		
100	Other snack food manufacturing	172	Pesticide and other agricultural chemical mfg.		
101	Coffee and tea manufacturing	173	Medicinal and botanical manufacturing		
102	Flavoring syrup and concentrate manufacturing	262	Farm machinery and equipment manufacturing		
103	Mayonnaise, dressing, and sauce manufacturing	263	Lawn and garden equipment manufacturing		
104	Spice and extract manufacturing	267	Food product machinery manufacturing		
105	All other food manufacturing	269	Sawmill, woodworking, and paper machinery		
106	Bottled and canned soft drinks & water				
107	Manufactured ice				
108	Breweries				
109	Wineries				

Appendix B: Contribution of Agriculture to California's Economy in 2014

Table B.1: The Contribution of Agriculture to California's Economy in 2014

	Employment		Labor Income		Value Added	
	# Jobs ¹	% NE CA jobs ²	\$ (in millions)	% CA Labor Income ³	\$ (in millions)	% CA Value Added ⁴
Production ⁵	268,400	1.2%	\$20,932	1.5%	\$40,603	1.8%
Processing ⁵	402,135	1.8%	\$22,964	1.6%	\$35,955	1.6%
Ag Related ⁵	243,057	1.1%	\$9,220	0.7%	\$12,480	0.5%
Direct Impacts	913,591	4.1%	\$53,017	3.8%	\$89,038	3.8%
Indirect Impacts	316,426	1.4%	\$22,965	1.6%	\$36,365	1.6%
Induced Impacts	414,046	1.9%	\$21,428	1.5%	\$37,995	1.6%
Total Contribution of Agriculture	1,644,064	7.5%	\$97,410	6.9%	\$163,397	7.1%

¹ Includes full-time and part-time jobs.
² Total number of jobs in California estimated at 22,029,557.
³ Total labor income in California estimated at \$1,409,252 M.
⁴ Total value added in California estimated at \$2,317,510 M.
⁵ Appendix A, Table A.1 defines economic sections for each category.





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