

Stanislaus County Agricultural Crop Report 2014

Technology in Agriculture

The reality of the present -
The gateway to the future





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Letter From the Commissioner



AGRICULTURAL COMMISSIONER'S OFFICE AND SEALER OF WEIGHTS & MEASURES

Milton O'Haire

Agricultural Commissioner/Sealer

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Karen Ross, Secretary
California Department of Food and Agriculture

and

The Honorable Board of Supervisors of Stanislaus County

Terry Withrow	District 3, Chairman
Dick Monteith	District 4, Vice-Chairman
William O'Brien	District 1
Vito Chiesa	District 2
Jim DeMartini	District 5

In accordance with Section 2279 of the California Food and Agricultural Code, we are pleased to submit the Stanislaus County's Agricultural Crop Report for 2014. This report provides a statistical description of Stanislaus County's agricultural production. We must emphasize that this report represents gross values of agricultural commodities and does not reflect production costs or profits. A recently published report by the USDA Economic Research Services shows that 2014 cash receipts for California farms and ranches increased 5% while profits decreased by 6% due to a rise in production expenses.

The value of agricultural commodities produced last year in Stanislaus County increased by 20% to \$4,397,286,000. This represents an all-time high in crop production values with an increase of \$734,286,000 from the 2013 gross production value of \$3,663,000,000. This increase is primarily attributed to a significant raise in the value of almond meats, cattle and calves, milk production, turkeys, silage and walnuts. Almond meats posted an increase of \$224.2 million followed by cattle and calves with \$156.3 million. There were more than 13,000 fewer acres harvested mainly due to forced fallowing brought on by a fourth year of drought conditions. Most of the acres fallowed were vegetable and silage crops on the west side of the county.

We wish to express our appreciation to the agricultural producers, industry representatives and public agencies that provided data for this report. We would also like to express sincere thanks to the Agricultural Commissioner's staff, especially Richard Homer and Amy Lomeli who compiled the report, and Susan Azevedo and Michael Welch who prepared the information for publication.

Respectfully submitted,

Milton O'Haire
Agricultural Commissioner/Sealer
Stanislaus County

Theresa Spezzano
County Director, UC Cooperative Extension
Stanislaus County



Technology in Agriculture

Just as farmers have harnessed nature's elements to produce an abundant crop they are harnessing the power of technology to increase production, lower costs, improve safety, conserve resources and lessen impacts to the environment. The innovations in the dot - com world are rapidly making their way into rural agricultural settings. The agricultural industry is full of opportunities and challenges and these new technologies provide additional ways to overcome challenges and capitalize on new opportunities.

Farmers are constantly faced with problems involving irrigation, pest or disease outbreaks and nutrient management; issues that have to be solved quickly to protect their crop and livelihood. There is an old adage that says, "A problem well defined is half solved." Technology is giving farmers new tools to help them quickly define problems that in the past may have gone undetected for days or weeks.

These new technologies span a wide spectrum including drones, environmental sensors, computers, microchips, aerial photography, lasers and Global Positioning Systems just to name a few. Companies are not only inventing new technologies but they are also blending old and proven cultivation practices with modern technology to achieve better results.

One of the fastest growing areas in agricultural technology involves the gathering and analyzing of data using various sensors, be it for monitoring animal health, irrigation systems, soil condition or pest pressure. Farmers and livestock producers can now often get real time information about their operations allowing them to respond quickly, saving time, resources and money.

Although the use of advanced technology is not new to agriculture, judging by the amount of new startup agricultural related tech companies, one might say we are at the beginning of a new phase in the agricultural revolution.



Mission and Values

Stanislaus County

Our Mission: To serve the public interest by promoting health, safety, welfare, and the economy in an efficient, cost effective manner.

Our Vision: To be respected for service in the community and to be known as the best County in America.

Agricultural Commissioner's Office

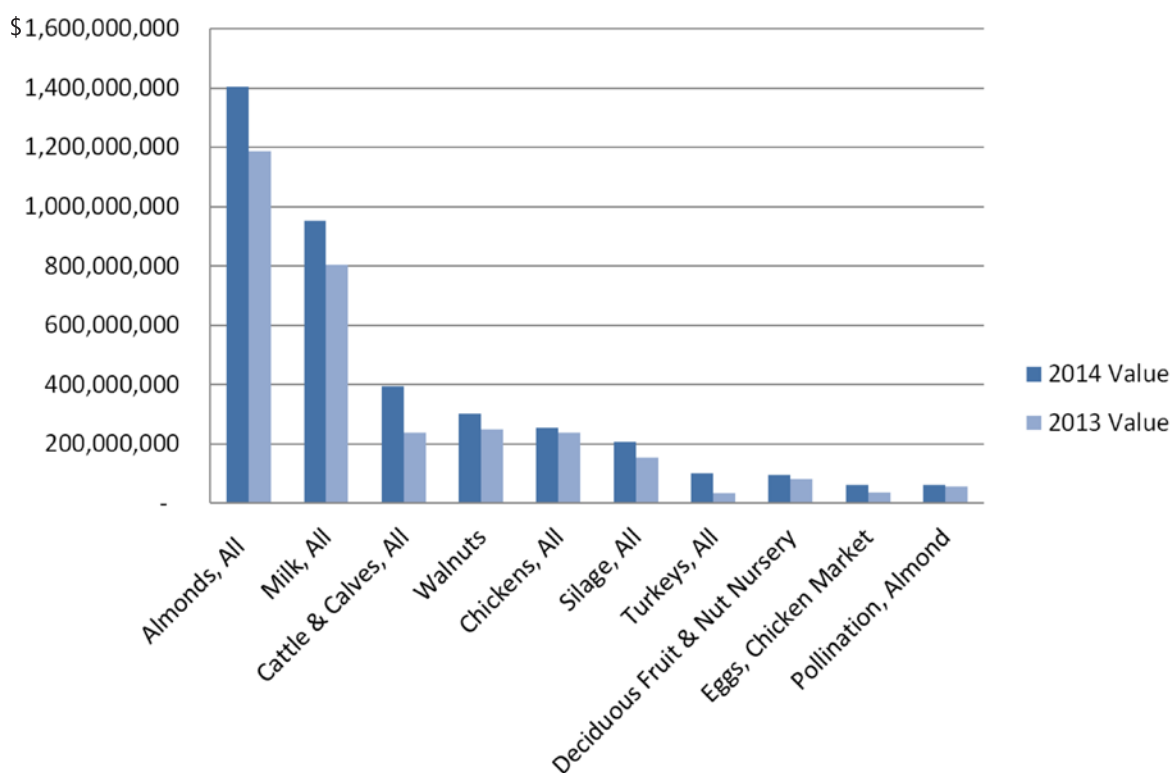
Our Mission: Support and protect the well-being of Agriculture, Business, and the Community.



Top 10 Commodities

Category	Rank	2014 Value (\$)	Rank	2013 Value (\$)
Almond, All ¹	1	1,405,106,000	1	1,186,204,000
Milk, All	2	952,189,000	2	804,419,000
Cattle & Calves, All	3	391,803,000	4	235,460,000
Walnuts	4	299,088,000	3	247,784,000
Chickens, All	5	252,108,000	5	235,372,000
Silage, All	6	206,193,000	6	152,785,000
Turkeys, All	7	99,864,000	16	31,731,000
Deciduous Fruit & Nut Nursery	8	94,319,000	7	78,433,000
Eggs, Chicken Market	9	59,590,000	15	33,811,000
Pollination, Almond	10	59,157,000	12	53,609,000
Total		\$3,819,417,000		
All Other Commodities		\$577,869,000		
Grand Total		\$4,397,286,000		

¹Almond Meats, Hulls, and Shells were separate in 2013





Apiary Products

Category	Year	Total	Unit	Per Unit	Total Value
Beeswax¹	2014	506,000	LB	\$3.48	\$1,761,000
	2013	513,000	LB	\$3.25	\$1,667,000
Honey¹	2014	4,341,000	LB	\$2.03	\$8,812,000
	2013	4,401,000	LB	\$1.95	\$8,582,000
Pollination, Almond	2014	329,000	COL	\$179.81	\$59,157,000
	2013	330,000	COL	\$162.45	\$53,609,000
Pollination, Misc.²	2014				\$610,000
	2013				\$468,000
Queen Bees	2014	7,500	EA	\$20.00	\$150,000
	2013	11,250	EA	\$16.00	\$180,000
Total	2014				\$70,490,000
	2013				\$64,506,000

¹Honey and Beeswax are based off of resident colonies plus the value of the colonies during almond pollination season
²Pollination, Misc. includes: Apple, Blueberry, Cherry, Cucumber, Melons, Onion, Pumpkin, Squash



Animal Health Monitoring

Modesto Jr. College is utilizing new ear tag technology to monitor cow health. MJC was able to purchase the system for their dairy unit with grant money. The new ear tags can determine animal location, how much time the animal spends

eating, ruminating, and resting as well as the optimal time to breed the cow. The data is transmitted to

several receivers on the dairy and passed onto a cloud-based system which enables the producer to get real-time information on the herd. If the device registers something out of the ordinary, it sends a text or email alert to the manager. Dairy instructor Bill Hobby stated that he is using the device to teach students to use “boots on the ground” information combined with the monitors to enhance breeding effectiveness and catch early signs of health problems.





Field Crops

Category	Year	Harvested Acres	Per Acre	Total	Unit	Per Unit	Total Value
Beans, Dried All	2014	10,216					\$19,845,000
	2013	9,670					\$18,252,000
Black-Eyed	2014	307	0.75	230	Ton	\$1,100	\$253,000
	2013	2,345	1.10	2,580	Ton	\$1,000	\$2,580,000
Baby Limas	2014	4,461	1.50	6,690	Ton	\$1,210	\$8,095,000
	2013	1,127	1.63	1,840	Ton	\$1,250	\$2,300,000
Large Limas	2014	4,760	1.26	6,000	Ton	\$1,720	\$10,320,000
	2013	5,932	1.42	8,420	Ton	\$1,450	\$12,209,000
Beans, Dried Other ¹	2014	688	1.00	688	Ton	\$970	\$667,000
	2013	266	1.40	372	Ton	\$1,000	\$372,000
Bean Straw	2014			6,000	Ton	\$85	\$510,000
	2013			8,240	Ton	\$96	\$791,000
Hay, Alfalfa	2014	29,197	7.08	207,000	Ton	\$264	\$54,648,000
	2013	31,449	7.07	222,000	Ton	\$222	\$49,284,000
Hay, Oat	2014	30,011	4.40	132,000	Ton	\$205	\$27,060,000
	2013	31,453	3.19	100,000	Ton	\$162	\$16,200,000
Hay, Other²	2014	12,406	4.20	52,100	Ton	\$204	\$10,628,000
	2013	12,691	3.72	47,200	Ton	\$172	\$8,118,000
Pasture, Irrigated	2014	32,500			Acre	\$213	\$6,923,000
	2013	32,800			Acre	\$235	\$7,708,000
Rangeland	2014	422,449			Acre	\$20	\$8,449,000
	2013	422,449			Acre	\$20	\$8,449,000
Rice	2014	903	4.74	4,280	Ton	\$400	\$1,712,000
	2013	1,181	3.87	4,570	Ton	\$340	\$1,554,000
Silage, All	2014	148,905					\$206,193,000
	2013	153,758					\$152,785,000
Other ³	2014	53,390	18.44	985,000	Ton	\$45	\$44,325,000
	2013	55,334	14.89	824,000	Ton	\$39	\$32,136,000
Corn	2014	90,890	27.36	2,487,000	Ton	\$64	\$159,168,000
	2013	93,595	27.57	2,580,000	Ton	\$46	\$118,680,000
Sudan	2014	4,625	12.69	58,700	Ton	\$46	\$2,700,000
	2013	4,829	12.00	57,900	Ton	\$34	\$1,969,000

¹Beans, Dried Other includes: Garbanzo

²Hay Other includes: Clover, Grass, Sudan, Teff, Wheat and Winter Forage

³Silage, Other includes: Alfalfa (one cutting), Barley, Grass, Oats, Ryegrass, Sorghum, Triticale, Vetch, Wheat, and Winter Forage



Field Crops (Continued)

Category	Year	Harvested Acres	Per Acre	Total	Unit	Per Unit	Total Value
Wheat, All	2014	2,898					\$4,596,000
	2013	2,898					\$3,441,000
Wheat, Grain	2014	2,898	3.28	9,500	Ton	\$273	\$2,594,000
	2013	2,898	2.91	8,430	Ton	\$271	\$2,285,000
Wheat, Straw	2014			14,300	Ton	\$140	\$2,002,000
	2013			12,700	Ton	\$91	\$1,156,000
Miscellaneous⁴	2014	2,076			Acre		\$2,030,000
	2013	2,218			Acre		\$2,138,000
Total	2014	691,561					\$342,084,000
	2013	700,567					\$267,929,000

⁴ Miscellaneous includes: Barley, Corn Grain, Corn Human Consumption, Oat Grain, Safflower, Sorghum, Sunflower



Stanislaus County General Facts

County Seat:

Modesto

Incorporated Cities:

Ceres, Hughson, Modesto, Newman, Oakdale, Patterson, Riverbank, Turlock, Waterford

Population:

531,997

Total Area:

1,515 Square Miles

Average Temperature:

61.17°

Average Annual Precipitation:

13.12 in.

Education:

California State University, Stanislaus; Modesto Junior College

Major Lakes, Reservoirs & Rivers:

Modesto Reservoir, Turlock Lake, Woodward Reservoir, San Joaquin River, Stanislaus River, Tuolumne River



Smart Spraying

Desires to increase efficiency and enhance worker safety have driven advances in agricultural spray technology. Features such as enclosed, temperature controlled and carbon filtered cabs provide for both improved worker safety and comfort. Nozzles specially designed for specific row width, or tree size allow for more precise applications using less chemical. Some designs even use lasers to “see” where trees are; turning the sprayer on only when it senses a tree. Extra guards are being used to prevent drift while directing sprays closer to the target. Electrostatic sprayers electrically charge the chemical being sprayed, enhancing the ability of the application to adhere to surfaces. The goal of these technologies is to increase the cost effectiveness and application efficiency of sprays while having less impact on workers and the environment.



Fruit and Nut

Category	Year	Harvested Acres	Per Acre	Total	Unit	Per Unit	Total Value
Almond Meats	2014	164,314	1.05	173,000	Ton	\$7,800	\$1,349,400,000
	2013	160,200	1.21	194,000	Ton	\$5,800	\$1,125,200,000
Almond Hulls	2014			346,000	Ton	\$150	\$51,900,000
	2013			404,000	Ton	\$140	\$56,560,000
Almond Shells	2014			173,000	Ton	\$22	\$3,806,000
	2013			202,000	Ton	\$22	\$4,444,000
Apples	2014	631	21.64	13,700	Ton	\$652	\$8,932,000
	2013	615	22.82	14,000	Ton	\$530	\$7,420,000
Apricots	2014	4,701	11.40	53,600	Ton	\$569	\$30,498,000
	2013	4,967	12.00	59,600	Ton	\$480	\$28,608,000
Cherries	2014	3,496	1.04	3,640	Ton	\$4,265	\$15,525,000
	2013	3,189	2.56	8,160	Ton	\$3,757	\$30,657,000
Citrus¹	2014	526					\$3,242,000
	2013	580					\$4,263,000
Grapes, All	2014	12,372					\$52,663,000
	2013	12,382					\$62,458,000
Red Varieties	2014	7,676	9.19	70,500	Ton	\$468	\$32,994,000
	2013	7,686	10.26	78,900	Ton	\$509	\$40,160,000
White Varieties	2014	4,696	9.50	44,600	Ton	\$441	\$19,669,000
	2013	4,696	10.41	48,900	Ton	\$456	\$22,298,000

¹Citrus includes: Grapefruit, Lemons, Oranges, Pomelos and Tangerines (all prices and yields averaged together)



Fruit and Nut (Continued)

Category	Year	Harvested Acres	Per Acre	Total	Unit	Per Unit	Total Value
Peaches All	2014	6,698					\$58,600,000
	2013	7,393					\$54,150,000
Cling	2014	6,028	20.76	125,000	Ton	\$384	\$48,000,000
	2013	6,657	18.16	121,000	Ton	\$350	\$42,350,000
Freestone	2014	670	15.80	10,600	Ton	\$1,000	\$10,600,000
	2013	736	16.00	11,800	Ton	\$1,000	\$11,800,000
Walnuts	2014	35,580	2.09	74,400	Ton	\$4,020	\$299,088,000
	2013	37,435	1.90	71,100	Ton	\$3,485	\$247,784,000
Miscellaneous²	2014	2,709					\$16,289,000
	2013	3,104					\$23,902,000
Total	2014	231,027					\$1,889,943,000
	2013	229,865					\$1,645,446,000

²Miscellaneous includes: Avocados, Berries (Blackberries, Boysenberries, Blueberries & Strawberries), Chestnuts, Figs, Jujube, Kiwi, Nectarines, Olives, Pears, Pecans, Persimmons, Pistachios, Plums, Pluots, Pomegranates, Prunes, Quince, and Table Grapes



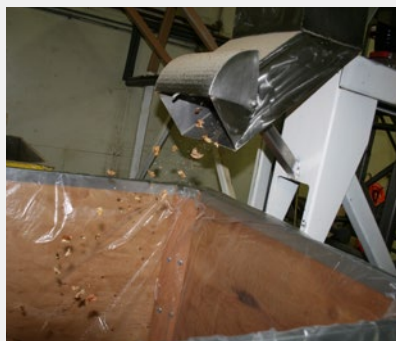
Solar Energy

Agriculture has always used the sun's energy to grow crops. Now that same energy is being harnessed to power pumps and weather stations on the farm and to provide neighboring communities with electricity. As technologies in solar energy advance, both initial and upkeep costs have decreased making solar energy an affordable option for many producers looking to decrease their electrical costs.



Production Automation

Much like the automotive industry, agricultural manufacturing is rapidly becoming more automated. Laser sorters can determine size and color keeping product as consistent as possible. X ray machines can scan product and boxes at several points along manufacturing lines to ensure consumer safety. Automation like robotic arms can also improve both efficiency and worker safety by performing repetitive, labor-intensive work like stacking 25 pound cases on a pallet.





Livestock and Poultry

Category	Year	Number of Head	Total Live Weight	Unit	Per Unit	Total
Cattle & Calves, All	2014	327,031				\$391,803,000
	2013	317,240				\$235,460,000
Beef Feeders ¹	2014	129,285				\$66,579,000
	2013	126,839				\$37,484,000
Beef Slaughter ²	2014	49,545				\$32,128,000
	2013	41,250				\$13,122,000
Dairy Slaughter ³	2014	76,201				\$104,096,000
	2013	70,250				\$67,785,000
Dairy Replacement	2014	72,000				\$189,000,000
	2013	78,901				\$117,069,000
Goats⁴	2014	20,293				\$1,369,000
	2013	22,548				\$1,521,000
Sheep & Lambs	2014	3,183	4,138	CWT	\$115.03	\$476,000
	2013	2,893	3,761	CWT	\$88.81	\$334,000
Hogs & Pigs	2014	19,262	29,305	CWT	\$113.97	\$3,340,000
	2013	17,684	27,851	CWT	\$78.69	\$2,192,000
Chickens, All	2014	175,384,532				\$252,108,000
	2013	164,359,164				\$235,372,000
Chickens	2014	45,698,000	273,517,000	LB	\$0.77	\$210,608,000
	2013	47,406,174	283,741,000	LB	\$0.71	\$201,456,000
Chicks	2014	129,686,532		EA	\$0.32	\$41,500,000
	2013	116,952,990		EA	\$0.29	\$33,916,000
Turkeys, All	2014	11,008,516				\$99,864,000
	2013	10,105,515				\$31,731,000
Turkeys	2014	2,930,425	79,476,000	LB	\$1.10	\$87,424,000
	2013	692,801	18,128,000	LB	\$0.93	\$16,859,000
Poults	2014	8,078,091		EA	\$1.54	\$12,440,000
	2013	9,412,714		EA	\$1.58	\$14,872,000
Squab	2014	460,413		EA	\$5.22	\$2,403,000
	2013	473,675		EA	\$5.09	\$2,411,000
Game Birds⁵	2014	125,515			\$7.47	\$938,000
	2013	345,950			\$3.42	\$1,183,000
Total	2014					\$752,301,000
	2013					\$510,204,000

¹Beef Feeders includes: Feed Lots, Beef Steers, Beef Heifers, Beef Replacement Heifers, Transient Cattle, Daily Drop Calves less Replacement Heifers

²Beef Slaughter includes: Beef Cows, Beef Bulls, Dairy Beef

³Dairy Slaughter includes: Spent Cows and Bulls

⁴Goats includes: Dairy Goat Offspring, Dairy Goat Slaughter and Meat Goats

⁵Game Birds includes: Chukar, Ducks, Geese, Pheasant, Partridge, Quail

Livestock and Poultry Products

Category	Year	Total	Unit	Per Unit	Total Value
Milk, All	2014	42,803,000	CWT		\$952,189,000
	2013	43,142,000	CWT		\$804,419,000
Market	2014	42,516,000	CWT	\$22.23	\$945,131,000
	2013	41,922,000	CWT	\$18.62	\$780,588,000
Manufacturing	2014	252,000	CWT	\$23.24	\$5,856,000
	2013	1,191,000	CWT	\$19.13	\$22,784,000
Milk, Goat	2014	34,543	CWT	\$34.81	\$1,202,000
	2013	28,500	CWT	\$36.72	\$1,047,000
Eggs, Chicken Market	2014	33,858,000	DOZ	\$1.76	\$59,590,000
	2013	35,969,000	DOZ	\$0.94	\$33,811,000
Eggs, Other¹	2014	5,439,629			\$7,013,000
	2013	3,925,000			\$5,787,000
Fiber and Wool²	2014	36,250	LB	\$5.16	\$187,000
	2013	34,000	LB	\$1.47	\$50,000
Manure³	2014	479,000	TON	\$6.75	\$3,233,000
	2013	571,000	TON	\$7.20	\$4,111,000
Total	2014				\$1,022,212,000
	2013				\$848,178,000

¹Eggs, Other includes: Turkey Hatching, Quail, and Duck Eggs

²Fiber and Wool includes: Alpaca Fiber, Sheep Wool

³Manure includes: Cow, Poultry



Drone Technology

It's been a "turbulent flight" for those seeking to use drones for agricultural purposes. The FAA only recently began approving safety and operations standards for commercial agricultural drone use on an individual company basis. With clearer rules, newer equipment and more competition, prices for drone services are quickly becoming more affordable and cost effective. The average farmer can now benefit from the use of specialized, sophisticated software and camera equipment which can be tailored to a particular crop and the information being sought. Growers are using drones in conjunction with weather stations and soil surveys in order to get a better picture of what is happening in a given orchard or field. From thermal and infra-red imaging used to determine plant health, to soil type and moisture analysis; the list of applications for drone technology is ever expanding.





Air Quality

California is a leader in reducing emissions from diesel engines and agricultural mechanical developers have been making strides in the effort to further reduce particulate matter from diesel exhaust. Nanotechnology - science, engineering, and technology on a molecular or atomic level - is being used to both increase the efficiency of combustion in an engine and to develop smaller, cheaper, more lightweight filters which have increased surface areas designed to trap particulate matter in the exhaust before it is expelled into the environment.



Nursery Products

Category	Year	Field Acres	Quantity Sold	Unit	Per Unit	Total Value
Deciduous Fruit & Nut	2014	1124	21,291,000	EA	\$4.43	\$94,319,000
Tree and Vines	2013	868	15,470,000	EA	\$5.07	\$78,433,000
Ornamental Trees & Shrubs	2014	538	2,822,000	EA	\$10.00	\$28,220,000
	2013	457	2,137,000	EA	\$11.87	\$25,366,000
Miscellaneous¹	2014	582				\$16,345,000
	2013	783				\$38,002,000
Total	2014	2244				\$138,884,000
	2013	2108				\$141,801,000

¹Miscellaneous includes: Christmas Trees, Lavender, Turf, Vegetable & Strawberry Transplants



Organic Products

Category	Year	Harvested Acres	Per Acre	Total	Unit	Per	Total Value
All Organic Products	2014	5,400					\$30,301,000
	2013	3,259					\$25,243,000



Other Agriculture

Category	Year	Total	Per Unit	Total Value
Firewood	2014	59,319	\$235.00	\$13,940,000
	2013	60,092	\$225.00	\$13,521,000
All Other Agriculture¹	2014			\$3,176,000
	2013			\$2,914,000
Total	2014	59,319		\$17,116,000
	2013	60,092		\$16,435,000

¹Other Agriculture includes: Aquaculture (Sturgeon, Bass, Catfish), Compost, Fuel Cogeneration, Vermiculture (Worms, Worm Castings)



Seed Crops

Category	Year	Harvested Acres	Per Acre	Total	Per Unit	Total Value
Field Crop¹	2014	306				\$675,000
	2013	290				\$526,000
Other²	2014	252				\$438,000
	2013	154				\$248,000
Total	2014	558				\$1,113,000
	2013	444				\$774,000

¹Field Crop includes: Black-Eyed Bean, Chickpea, Lima Bean

²Other includes: Oat, Onion, Rice, Squash, Tomato, Vegetable, Wheat



Vegetables

Category	Year	Harvested Acres	Per Acre	Total	Unit	Per Unit	Total Value
Beans, Succulent¹	2014	1,759	1.40	2460	Ton	\$1,100	\$2,706,000
	2013	3,329	1.50	4,990	Ton	\$1,050	\$5,240,000
Broccoli	2014	2,674	5.00	13,400	Ton	\$440	\$5,896,000
	2013	2,678	5.00	13,400	Ton	\$440	\$5,896,000
Melons, All	2014	3,035					\$26,106,000
	2013	3,235					\$25,708,000
Cantaloupe	2014	2,132	19.49	41,600	Ton	\$429	\$17,846,000
	2013	2,146	18.00	38,600	Ton	\$400	\$15,440,000
Honeydew	2014	484	18.00	8,700	Ton	\$417	\$3,628,000
	2013	600	20.00	12,000	Ton	\$391	\$4,692,000
Melons, Other ²	2014	419	46.00	19,300	Ton	\$240	\$4,632,000
	2013	489	34.68	17,000	Ton	\$328	\$5,576,000
Miscellaneous³	2014	3,416					\$21,465,000
	2013	3,882					\$27,621,000
Pumpkins	2014	288	17.62	5,080	Ton	\$360	\$1,829,000
	2013	286	15.00	4,290	Ton	\$300	\$1,287,000
Squash, All	2014	131	18.00	2,360	Ton	\$250	\$590,000
	2013	239	16.50	3,940	Ton	\$225	\$887,000
Sweet Potatoes	2014	1,267	16.10	20,400	Ton	\$750	\$15,300,000
	2013	1,143	23.00	26,300	Ton	\$310	\$8,153,000

¹Beans, Succulent includes: Green Baby Limas

²Melons, Other includes: Canary, Casaba, Crenshaw, Hami, Persian, Sharlyn, Watermelon

³Miscellaneous includes: Artichoke, Asparagus, Beet, Brussel Sprout, Cabbage, Carrot, Cauliflower, Chinese Greens, Cilantro, Cucumber, Cucumber-Pickling, Daikon, Eggplant, Garlic, Herb-Spice, Kale, Kohlrabi, Lettuce-Head, Lettuce-Leaf, Mustard Greens, Okra, Onion-Dry, Onion-Green, Parsley, Pea, Peppers, Potato, Radish, Rosemary, Sage, Spinach, Sweet Basil, Swiss Chard, Turnip, Vegetable, Vegetable Leaf



Vegetables (Continued)

Category	Year	Harvested Acres	Per Acre	Total	Unit	Per Unit	Total Value
Tomatoes, All	2014	13,854					\$58,950,000
	2013	19,289					\$67,692,000
Fresh	2014	762	15.45	11,800	Ton	\$550	\$6,490,000
	2013	832	15.00	12,500	Ton	\$555	\$6,938,000
Processing	2014	13,092	46.61	610,000	Ton	\$86	\$52,460,000
	2013	18,457	44.50	821,000	Ton	\$74	\$60,754,000
Total	2014	26,424					\$132,842,000
	2013	34,081					\$142,484,000



Summary

Category	Year	Harvest Acreage	Total Value
Apiary Products	2014		\$ 70,490,000
	2013		\$ 64,506,000
Field Crops	2014	691,561	\$ 342,084,000
	2013	700,567	\$ 267,929,000
Fruit and Nut Crops	2014	231,027	\$ 1,889,943,000
	2013	229,865	\$ 1,645,446,000
Livestock and Poultry	2014		\$ 752,301,000
	2013		\$ 510,204,000
Livestock and Poultry Products	2014		\$ 1,022,212,000
	2013		\$ 848,178,000
Nursery Products	2014	2,244	\$ 138,884,000
	2013	2,108	\$ 141,801,000
Organic Products	2014	5,400	\$ 30,301,000
	2013	3,259	\$ 25,243,000
Other Agriculture	2014		\$ 17,116,000
	2013		\$ 16,435,000
Seed Crops	2014	558	\$ 1,113,000
	2013	444	\$ 774,000
Vegetable Crops	2014	26,424	\$ 132,842,000
	2013	34,081	\$ 142,484,000
Total	2014	957,214	\$ 4,397,286,000
	2013	970,324	\$ 3,663,000,000

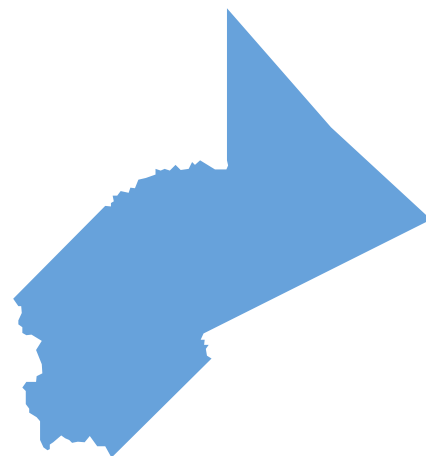
> Comparing Stanislaus County

State	Income*
Tennessee	\$4,228,144,000
Virginia	\$4,168,190,000
Louisiana	\$3,992,007,000
New Mexico	\$3,665,263,000
South Carolina	\$2,716,614,000
Maryland	\$2,416,801,000
Utah	\$2,375,219,000
Wyoming	\$1,826,389,000
Delaware	\$1,476,742,000
New Jersey	\$1,021,120,000
Vermont	\$992,031,000
Nevada	\$866,934,000
Maine	\$837,942,000
West Virginia	\$831,152,000
Hawaii	\$716,649,000
Connecticut	\$629,379,000
Massachusetts	\$459,118,000
New Hampshire	\$250,305,000
Rhode Island	\$75,382,000
Alaska	\$31,999,000

\$3,831,926,000

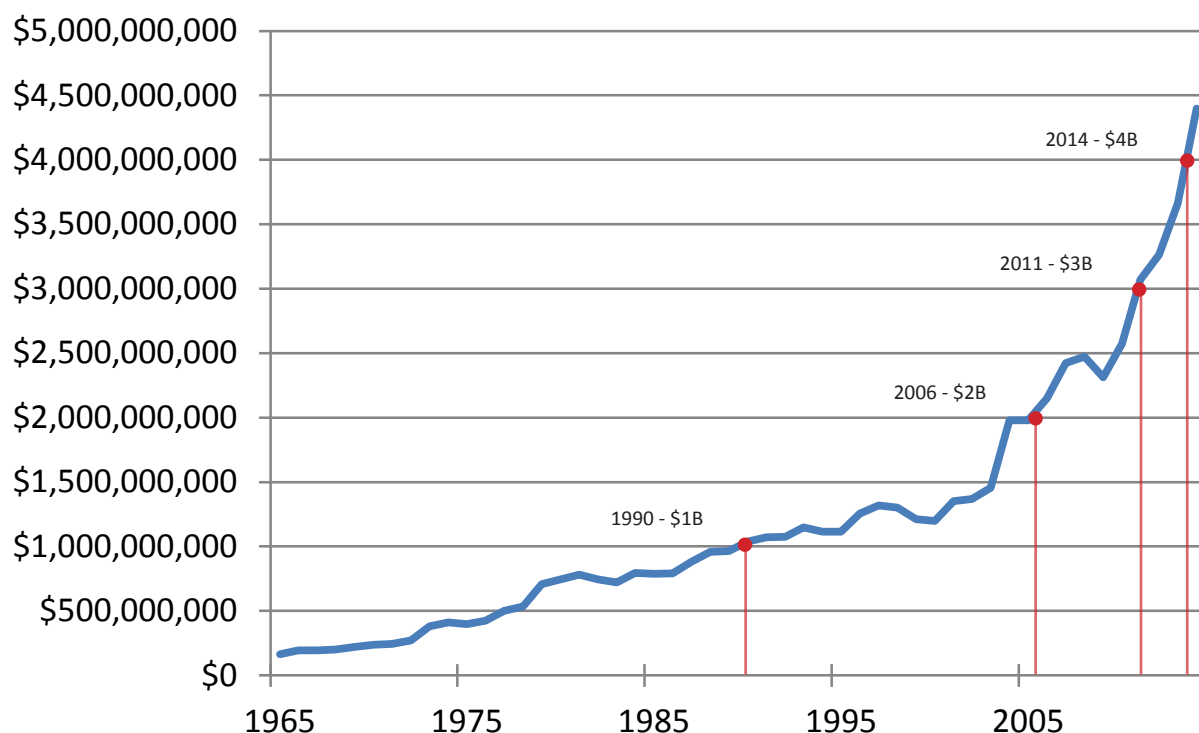
Stanislaus \$4,397,286,000

Stanislaus County ranks higher than twenty states in agricultural income, and higher than eight states' incomes combined.



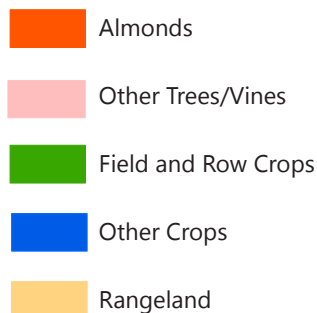
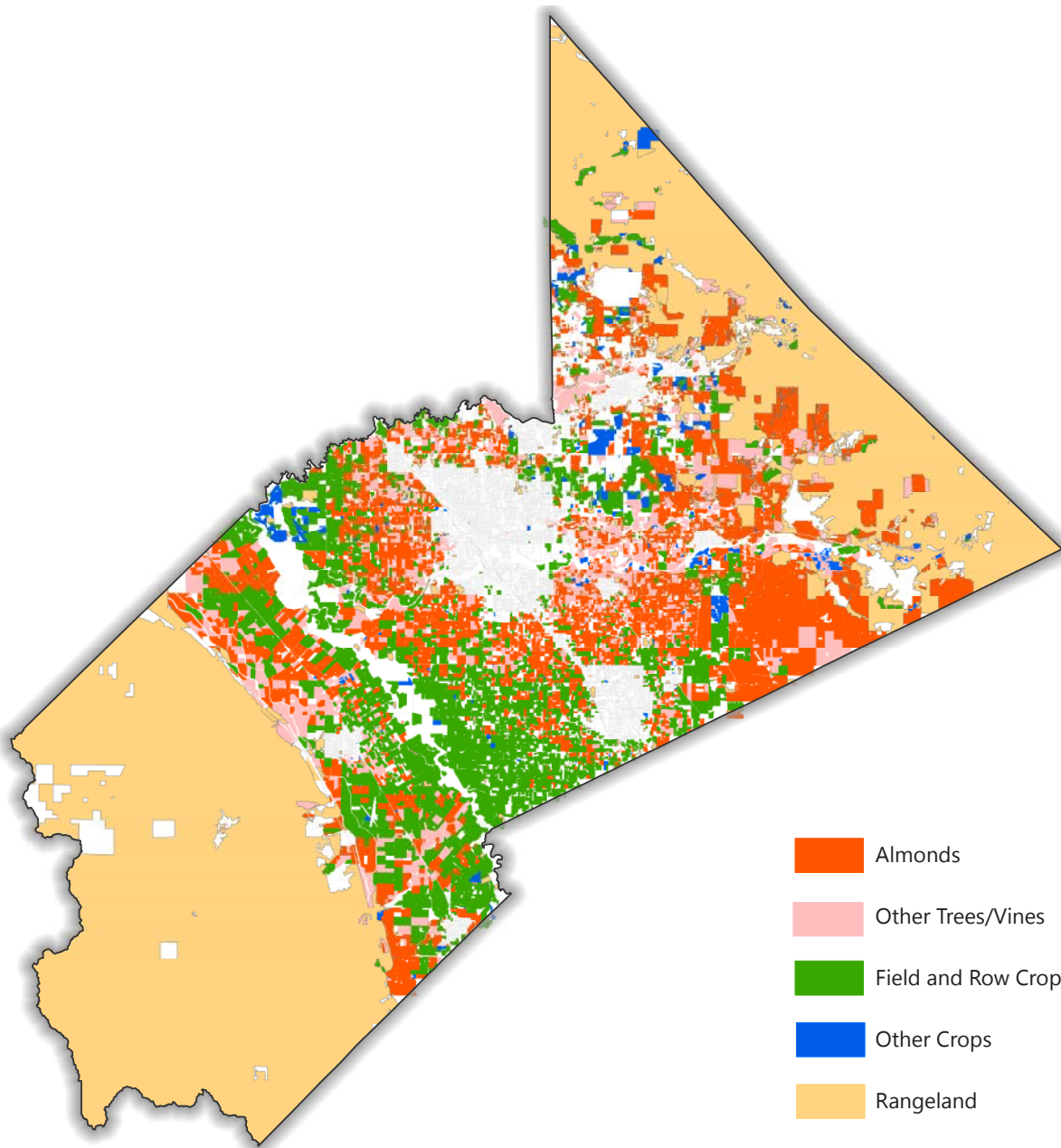
*Source: USDA Economic Research Service

50 Years of Production





Stanislaus County Crops Map



Stanislaus County Agricultural Facts*

Number of Farms:	4,143
Land in Farms:	768,046 Acres
Average Farm Size:	185 Acres
Median Farm Size:	20 Acres
Number of Growers:	2,261
Number of Organic Growers:	37

*Source: USDA 2012 Census



Export Certificates

Exports to 109 Countries

Algeria	Ecuador	Kuwait	Qatar
Argentina	Egypt	Lao People's Democratic Republic	Russian Federation
Armenia	El Salvador	Latvia	Saudi Arabia
Australia	Estonia	Lebanon	Serbia
Austria	Ethiopia	Lithuania	Singapore
Azerbaijan	Finland	Macao	Slovenia
Bahrain	France	Macedonia, Former Yugoslav Republic of	South Africa
Bangladesh	French Polynesia	Malaysia	Spain
Barbados	Georgia	Malta	Sri Lanka
Belarus	Germany	Mexico	Sudan
Belgium	Greece	Morocco	Sweden
Belize	Guatemala	Myanmar	Switzerland
Bolivia, Plurinational State of	Guyana	Nepal	Syrian Arab Republic
Bosnia and Herzegovina	Honduras	Netherlands	Taiwan
Brazil	Hong Kong	New Caledonia	Thailand
Bulgaria	Hungary	New Zealand	Trinidad and Tobago
Canada	India	Nicaragua	Tunisia
Cayman Islands	Indonesia	Nigeria	Turkey
Chile	Iran, Islamic Republic of	Norway	Ukraine
China	Iraq	Oman	United Arab Emirates
Colombia	Ireland	Pakistan	United Kingdom
Costa Rica	Israel	Panama	Uruguay
Croatia	Italy	Peru	Venezuela, Bolivarian Republic of
Curaçao	Jamaica	Philippines	Vietnam
Cyprus	Japan	Poland	Yemen
Czech Republic	Jordan	Portugal	
Denmark	Kazakhstan		
Dominican Republic	Kenya		
	Korea, Republic of		



Note: These are the top 10 destinations, composing 61% of county certified exports.

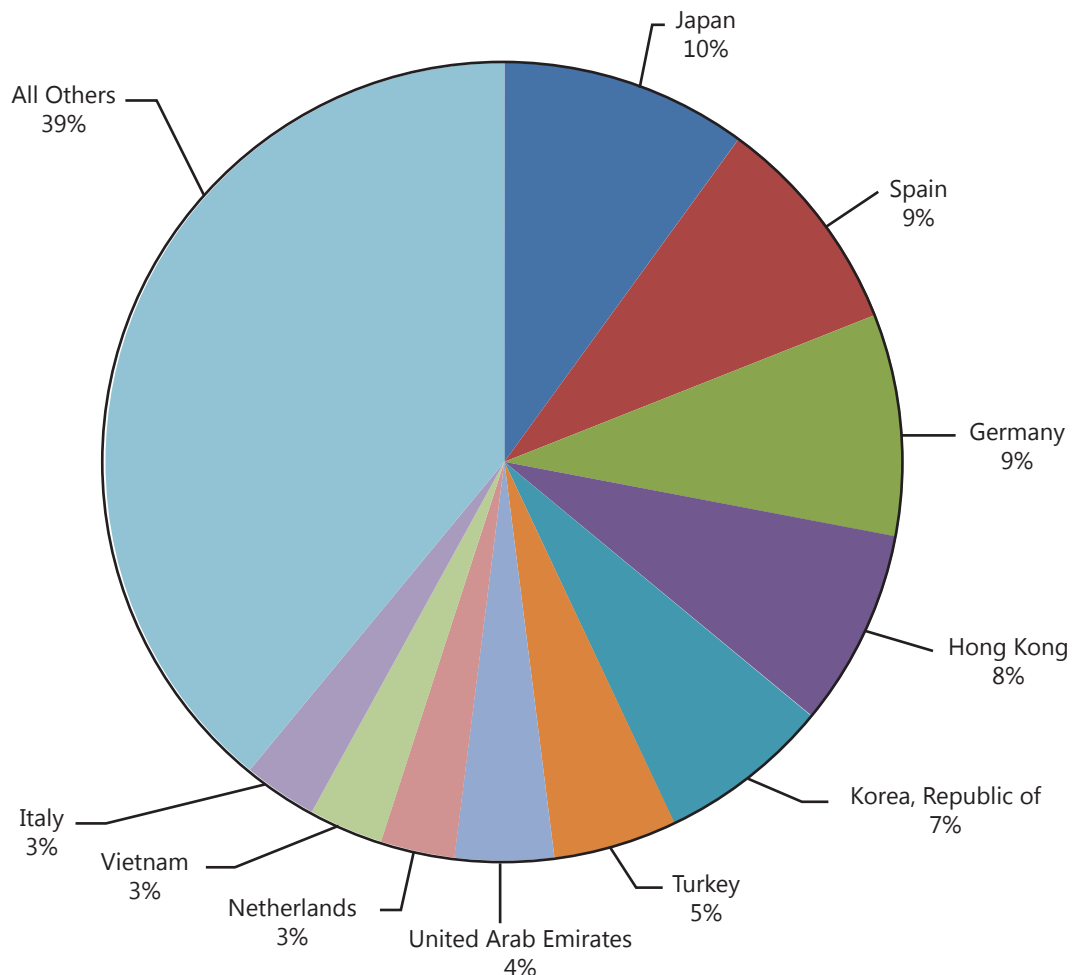


Terraced Farming

Used in many cultures for centuries, terraced farming is an old technology that is developing a new following - especially in eastern Stanislaus County - as farmers expand into less desirable soils. Terracing is a way of making successive flat levels of ground on hillsides. Utilizing high accuracy laser leveling with Global Imaging Systems (GIS) and Global Positioning Systems (GPS), terraced farming is allowing farmers to increase value and production in terrain traditionally too hilly to farm most crops. Using precise high efficiency sprinklers or drip irrigation, terraced land can be irrigated effectively while limiting runoff and soil erosion. Terraced farming also can improve worker safety. When operating equipment, terraced areas are easier to navigate and they are less prone to roll over accidents that can occur when working on steep ground.



2014 Top Exports by Country



*Only includes countries requiring or requesting export certificates



Agricultural Commissioner Programs

Protecting Agriculture and the Environment

Each agricultural commissioner is charged with the protection of California agriculture, environment, and public health and safety. These goals are accomplished through the management of programs designed to achieve our mission through a combination of public outreach, industry education and enforcement actions. County Agricultural Commissioners (CAC) carry out the programs listed below to accomplish these aims:

PEST EXCLUSION: This program provides the first line of defense for California agriculture and the environment against the invasion of exotic pests. Inspections provide protection from introduction of insect and disease pests that may be brought into the state through the movement of plants and plant products. This program also involves inspections of plant material being delivered to other states and countries and the issuance of certificates documenting compliance with their entry requirements.

PEST DETECTION: This program provides the second line of defense against exotic pests through the early detection of new introductions before they become widely established. Traps are placed in primarily urban areas to detect such insect pests as Mediterranean and Mexican fruit flies, Gypsy Moth, Japanese Beetle, and a host of other targeted pest species. Through early detection the likelihood of these pests becoming established in the state is lessened and the cost and environmental impact of eradication is minimized.

PEST ERADICATION: Pest eradication programs are often conducted following the discovery of an introduced pest species. Often these projects are partially or completely under the jurisdiction of the California State Department of Food and Agriculture. However, the CAC is often involved as the liaison to local government. In some cases, the CAC has a more active role as is the case in enforcing host free periods for Pink Bollworm, a serious pest of cotton, or in the eradication of Red Imported Fire Ant.

PEST MANAGEMENT: The CAC is charged with the responsibility of managing nuisance pests of agriculture and human health. Many of these pests are recently introduced species that have become established despite best efforts to keep them out. An example would be the Glassy-winged Sharpshooter that is under intensive control efforts in several southern counties while eradication efforts continue in counties further north. Others are common pests such as ground squirrels, voles, gophers and noxious invasive weeds that can be serious pests of agriculture and urban areas alike.

PESTICIDE USE ENFORCEMENT: A major program developed to provide for the proper, safe, and effective use of pesticides essential for production of food and fiber and for protection of the public health and safety. It also protects the environment from potentially harmful pesticides by prohibiting,

regulating or ensuring proper stewardship of pesticides. The program also focuses on agricultural and pest control workers, ensuring safe working conditions, use of proper protective equipment and training for employees who work with or around pesticides. Other components of the program include pesticide use reporting, incident investigations, outreach activities promoting best management practices, and monitoring applications in the field.

SEED CERTIFICATION: Inspections are performed at the retail and wholesale establishments that sell seeds. Samples are drawn for germination and purity testing. Labeling is inspected for compliance with state requirements. Through this program, certification services are also performed for growers and processors, in cooperation with the California Crop Improvement Association.

NURSERY INSPECTION: Through this program the CAC inspect the growing, propagation, production and sale of nursery stock to assure cleanliness from pests, true variety and vigorous-healthy plants for sale to the consumer.

FRUITS, NUTS AND VEGETABLE STANDARDIZATION: This program ensures compliance with California's minimum standards regarding quality and marketing of all produce commercially grown and/or marketed in the state. Direct Marketing regulation and Organic law enforcement are part of a program that provides for local protection to growers, marketers and consumers.

EGG INSPECTION: Retailers and packers of eggs in the State are inspected to enforce state and federal health, quality, and grade standards.

APIARY INSPECTION: A program that emphasizes the registration and site location of honeybee colonies in the county. At the request of beekeepers or growers, the CAC inspects colonies for strength and health to ensure effective pollination.

CROP STATISTICS: As required by the California Food and Agricultural Code, the CAC compiles and records information in the annual crop report regarding the gross production and value of the county's commodities. Also, disasters to agriculture are surveyed and the information collected is used by other agencies offering disaster relief.



Pest Detection

Pest Detection & Emergency Projects 2014

To protect the agricultural and horticultural industries in Stanislaus County, 5,560 traps were placed to monitor for specific insects. Some of the traps use an insect pheromone to attract the insect into the trap, while some use a food bait and others use a color attractant. About 73% of traps are in residential yards, 25% in nurseries and 2% in vineyards/orchards. Trapping allows for the early detection of invasive and destructive pests that would be detrimental to our economy, the environment, and our health.

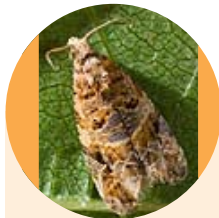


Mediterranean Fruit Fly

Traps Deployed: 439

Crops Affected:

Walnut, tomato, apple, almond, plum, peach, nectarine, pear, grape, citrus, fig, pomegranate, and olive



European Grapevine Moth

Traps Deployed: 15

Crops Affected:

Grapes and spurge laurel



Asian Citrus Psyllid

Traps Deployed: 1300

Crops Affected:

Citrus

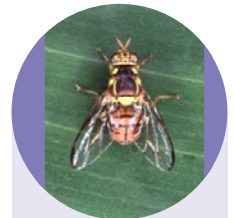


Glassy-Winged Sharpshooter

Traps Deployed: 1905

Crops Affected:

Grape, almond, peach, and citrus (vector for Pierce's Disease)

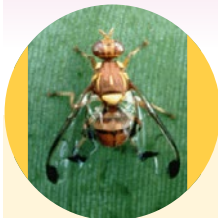


Oriental Fruit Fly

Traps Deployed: 439

Crops Affected:

Apple, citrus, cucumber, fig, grape, pear, pomegranate, stone fruit, tomato, and walnut



Melon Fruit Fly

Traps Deployed: 211

Crops Affected:

Peach, orange, bean, tomato, cucumber, apple, cantaloupe, grape, pear, and watermelon

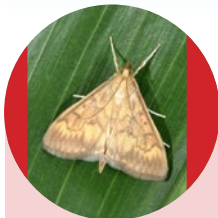


Vine Mealybug

Traps Deployed: 39

Crops Affected:

Grapes



European Corn Borer

Traps Deployed: 8

Crops Affected:

Corn, potatoes, oat, green beans, and rhubarb

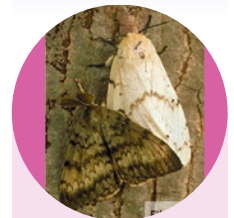


Japanese Beetle

Traps Deployed: 204

Crops Affected:

Turf and roses



Gypsy Moth

Traps Deployed: 204

Crops Affected:

Most trees

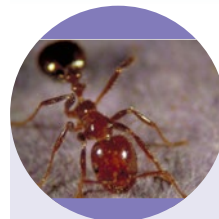


Mexican Fruit Fly

Traps Deployed: 220

Crops Affected:

Apple, apricot, citrus, pear plum, peach, nectarine, and pomegranate



Red Imported Fire Ant

Traps Deployed: 256

Crops Affected:

Infests agricultural and residential settings, as well as natural habitats - dangerous to children, pets, the elderly, and wildlife

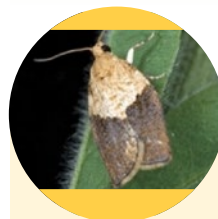


Apple Maggot

Traps Deployed: 53

Crops Affected:

Stone and pome fruit



Light Brown Apple Moth

Traps Deployed: 439

Crops Affected:

Alfalfa, almond, apple, berries, broccoli, citrus, corn, grape, olive, stone fruit, and tomatoes



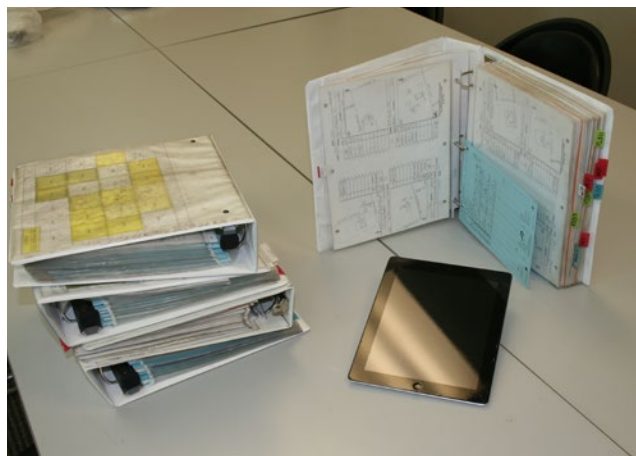
Trapper Technology

County Insect Trappers use Global Positioning System (GPS) units to record exact locations of traps for County, State and Federal data collection.



County Insect Trappers currently use tablet computers to enter trap servicing information into a data base.

Currently County Insect Trappers must also create and maintain paper maps and records requiring about 53 binders to house the data. In the near future we will begin using a computer trapping program that will replace all of the information in the binders and the data base by placing it into an iPad. The electronic data can then be shared with CDFA and USDA to document the trapping program and to aid in quickly determining the extent of any exotic fruit fly discovery.



2014 Pest Exclusion Program Activities

1,470 incoming shipments of plant material were inspected at nurseries and shipping terminals for exotic, invasive agricultural pests and quarantine documentation compliance.

91,789 Bee Colonies were inspected after arriving from outside of the state for Red Imported Fire Ant and other quarantine pests.

756 Origin Certificates were issued for nursery stock being exported to other counties within California.

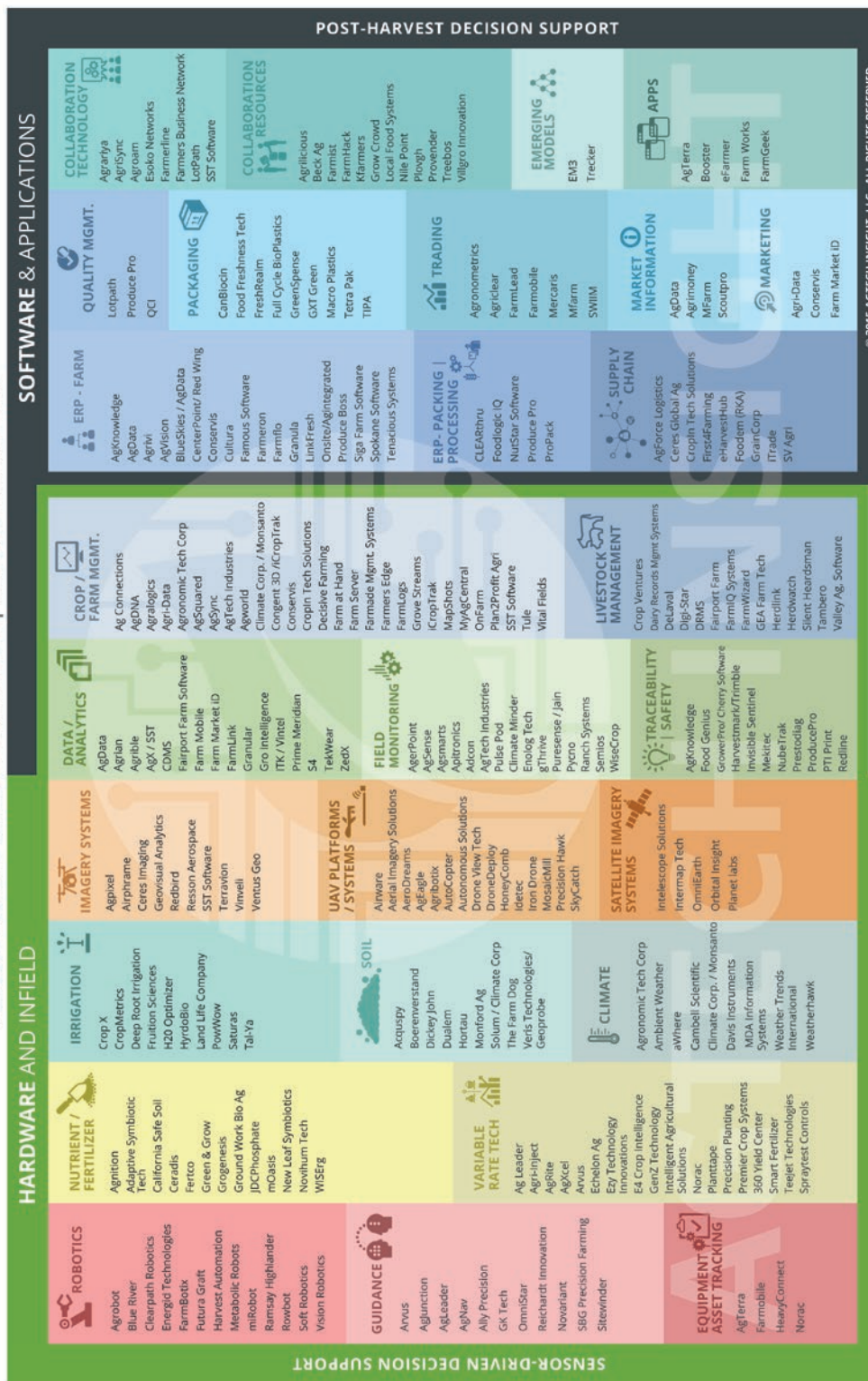
8,865 Phytosanitary Certificates were issued for agricultural commodities being exported to foreign countries.

1,760 acres of Production Nursery Stock were surveyed for compliance with pest cleanliness and quality standards.

12 Feed Grain Mills were inspected, sampled and certified to clean weed seed from feed grain arriving from outside of Stanislaus County.



AGTECH INSIGHT EMERGING GROWTH | AGTECH MARKET MAP



"The companies listed above are just a partial snapshot of those within our orbit. If you are interested in a specific category or do not see your company listed please contact us at Solutions@agtechinsight.com"

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- JKB Energy
- John Starn
- Mid Valley Nut
- Modesto Jr. College Agriculture Department
- Natural Resources Conservation Service
- Ski Angle
- Wilbur-Ellis

tanislaus County growers produce over 230 commodities

