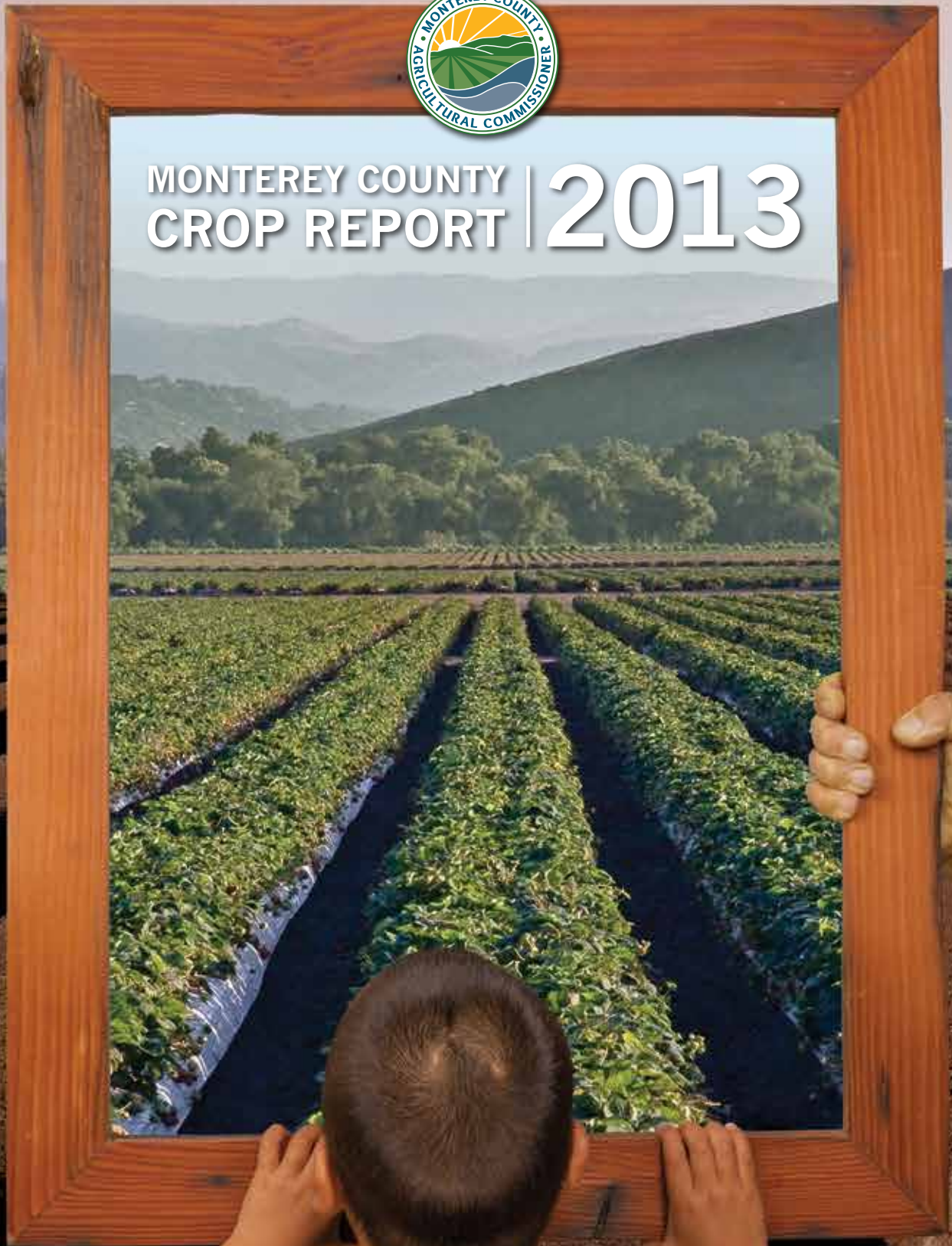




MONTEREY COUNTY | 2013 CROP REPORT



STEWARDSHIP
FOR OUR FUTURE

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In Memoriam

Ingrid David-Horgan
July 19, 1970 - October 4, 2013

Monterey County Agricultural Commissioner

Karen Ross Secretary
California Department of Food & Agriculture and

The Honorable Board of Supervisors of Monterey County

Louis R. Calcagno	District 2, Chair
Simón Salinas	District 3, Vice Chair
Supervisor Armenta	District 1
Supervisor Jane Parker	District 4
Supervisor Dave Potter	District 5



ERIC LAURITZEN
Agricultural Commissioner

It is a pleasure to present the 2013 Monterey County Crop Report that is prepared pursuant to the provisions of Section 2279 of the California Food & Agriculture Code. This report reflects a production value of \$4.38 billion for Monterey County, which is an increase of 9% or \$375 million over the previous year.

Crop values vary from year to year based on production, market, and weather conditions. Nine of our ten top crops showed increases in value. In nearly all cases, the increase can be attributed to strong market prices and even or slightly increased production. Leaf lettuce, the only top crop not following that trend, shows a slight decrease as we continue to refine production data sources. Strawberries increased by 11% to place that crop solidly in the #1 position. Other notable increases were broccoli (+35%), cauliflower (+48%), head lettuce (+16%) and dry onions (+57%). Avocados, a proportionally smaller crop, showed an increase of 421%, demonstrating how dramatically market prices and Mother Nature can influence values from year to year. Notable decreases were seen in livestock and field crops that depend on rainfall, with total combined losses in excess of \$10.3 million.

Monterey County feeds the world, but with that comes a responsibility to care for our natural resources. This year our report highlights practices that Monterey County growers and ranchers employ to help steward their land. These practices, compiled from a series of one-on-one interviews, are in use today on many farms and ranches in Monterey County. They demonstrate that many of our growers are taking it upon themselves to conserve water, reduce waste and energy streams, conserve soil, and care for the land. As the saying goes, No Farms, No Food™.

It is always important to note that the figures provided here are gross values and do not represent or reflect net profit or loss experienced by individual growers or by the industry as a whole. Growers do not have control over most input costs, such as fuel, fertilizers, and packaging, nor can they significantly affect market prices. The fact that the gross value of agriculture is holding steady reflects positively on the diversity and importance of our agricultural industry.

This report is our yearly opportunity to recognize the growers, shippers, ranchers, and other businesses ancillary to and supportive of agriculture, which is the largest driver of Monterey County's economy. As such, we would like to extend our thanks to the industry for their continued effort to provide vital information that enables the compilation of the Monterey County Crop Report. While we continually strive to improve upon this information, without their assistance, this report would not be possible.

Special recognition for the production of this report goes to Richard Ordonez, Graham Hunting, Shayla Neufeld, Christina McGinnis, and to all of the staff who assisted in compiling this information and improving the quality of the report.

Respectfully submitted,



Eric Lauritzen
Agricultural Commissioner



COUNTY OF MONTEREY AGRICULTURAL COMMISSIONER

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Monterey County's Ten Million Dollar Crops

CROPS	2013 CROP VALUE	2013 CROP RANKING	2012 CROP RANKING
Strawberry	\$869,488,000	1	1
Leaf Lettuce	\$659,646,000	2	2*
Head Lettuce	\$550,628,000	3	3
Broccoli	\$426,933,000	4	4
Nursery	\$312,346,000	5	5
Wine Grapes	\$226,982,000	6	6
Celery	\$217,452,000	7	7
Misc. Vegetables	\$173,602,000	8	8
Cauliflower	\$163,319,000	9	10
Spinach	\$122,676,000	10	9
Mushrooms	\$71,534,000	11	12
Salad Products	\$70,577,000	12	13
Spring Mix	\$70,140,000	13	11
Artichokes	\$47,390,000	14	14
Cabbage	\$45,127,000	15	16
Raspberries	\$43,791,000	16	15
Beef Cattle	\$33,665,000	17	17
Peas	\$26,737,000	18	18
Carrots	\$24,331,000	19	20
Kale	\$22,227,000	20	23
Radicchio	\$19,861,000	21	22
Onions, Green	\$18,957,000	22	19
Rangeland	\$17,051,000	23	25
Asparagus	\$16,986,000	24	24
Onions, Dry	\$15,989,000	25	27
Lemon	\$14,856,000	26	26

*Adjusted figure



GROSS PRODUCTION VALUE

CATEGORIES	2013 TOTAL VALUE	2012 TOTAL VALUE*
Vegetable Crops	\$2,833,775,000	\$2,557,772,000
Fruit & Nuts	\$1,159,589,000	\$1,057,684,000
Nursery Crops	\$312,346,000	\$307,543,000
Livestock & Poultry	\$45,024,000	\$53,126,000
Field Crops	\$19,990,000	\$19,338,000
Seed Crops	\$8,803,000	\$8,550,000
Apiary	\$195,000	\$204,000
TOTALS	\$4,379,722,000	\$4,004,217,000

*Adjusted figure

Sharing Our Stewardship | by Bob Martin & Nikki Rodoni

Although we are honored to be recognized as leaders in stewardship by this report, it's important to acknowledge that many other growers have done as much as us, if not more. Both of us were born and raised in the Monterey County ag community. We have seen major changes in the way we address environmental and social issues that sustain both our natural surroundings and our businesses.

For example, many of the practices we use today actually save money and improve water quality at the same time. Ag certainly faces some hurdles in satisfying the needs of food safety versus environmental and water quality protection. But as resilient ag professionals, we have been successful in dealing with many of these issues by utilizing science and research.

When we talk about the “bottom line”, we seek equity in the quality of life among farmers, farm families and farming communities. As stewards of the environment, we want to preserve the resources that sustain us today and into the future—while remembering that if it isn't profitable, it isn't sustainable.

Sustainable farming isn't new, but through it, the ag industry can tell its story. After



decades of ups and downs, many large and small farms in Monterey County are still family-owned. That's an indicator of sustainability and tenacity. For our family farms, taking care of the land, seeking gains in efficiency, and conserving resources are all part of a successful business. And for farmers, it's second nature.

Sustainable ag businesses use measurement and documentation to explain and market their stewardship efforts and successes to consumers. Instead of waiting for new regulations and responding to them, we proactively chart continuous improvements and report them to regulators and the public. In doing so, we become more resourceful with our use of land, water and air while we cater to

the growing segment of environmentally-conscious buyers.

Finally, we see good stewardship as a shared experience. Many ag companies in Monterey County are committed to communicating their best practices and results for the benefit of others in the industry. In 2011, the Monterey County Sustainability Working Group was created as a network for ag producers and processors on the Central Coast. The group collaboratively learns how to implement, measure, improve and promote sustainability efforts. In addition, it welcomes outside expertise to present and help analyze new strategies to streamline work in the pursuit of wiser use of our resources. Working together, we will shape a positive future for agriculture and for the planet.

Monterey County's Major Crop Trends

CROP		1993	2003	2013
Artichokes	Acre	6,410	5,993	5,203
	Value	\$28,303,000	\$45,847,000	\$47,390,000
	CPI Adjusted*	\$45,650,000	\$58,034,000	\$47,390,000
Broccoli	Acre	58,905	47,984	65,577
	Value	\$227,061,000	\$280,434,000	\$426,933,000
	CPI Adjusted	\$366,227,000	\$354,980,000	\$426,933,000
Cauliflower	Acre	23,339	17,112	20,987
	Value	\$104,565,000	\$105,400,000	\$163,319,000
	CPI Adjusted	\$168,653,000	\$133,418,000	\$163,319,000
Celery	Acre	8,021	9,856	13,570
	Value	\$62,898,000	\$105,583,000	\$217,452,000
	CPI Adjusted	\$101,448,000	\$133,649,000	\$217,452,000
Grapes (Wine)	Acre	26,801	34,287	42,986
	Value	\$101,973,000	\$160,219,000	\$226,982,000
	CPI Adjusted	\$164,473,000	\$202,809,000	\$226,982,000
Head Lettuce	Acre	72,765	71,731	44,680
	Value	\$355,812,000	\$489,306,000	\$550,628,000
	CPI Adjusted	\$573,890,000	\$619,375,000	\$550,628,000
Leaf Lettuce	Acre	30,257	63,036	65,008
	Value	\$132,514,000	\$552,649,000	\$659,646,000
	CPI Adjusted	\$213,732,000	\$699,556,000	\$659,646,000
Mushrooms	Pounds	44,734,000	46,307,000	32,965,000
	Value	\$44,734,000	\$63,705,000	\$71,534,000
	CPI Adjusted	\$72,152,000	\$80,639,000	\$71,534,000
Nursery Products	Acre	1,968	2,023	1,373
	Value	\$116,515,000	\$240,898,000	\$312,346,000
	CPI Adjusted	\$187,927,000	\$304,934,000	\$312,346,000
Spinach	Acre	5,670	16,154	12,317
	Value	\$42,635,000	\$149,150,000	\$122,676,000
	CPI Adjusted	\$68,766,000	\$188,797,000	\$122,676,000
Strawberries	Acre	8,346	8,472	10,980
	Value	\$213,943,000	\$253,347,000	\$869,488,000
	CPI Adjusted	\$345,069,000	\$320,692,000	\$869,488,000

TOTAL OF MAJOR CROPS ABOVE	Acre	242,482	276,648	282,681
	Value	\$1,430,953,000	\$2,446,538,000	\$3,668,394,000
	CPI Adjusted	\$2,307,987,000	\$3,096,883,000	\$3,668,394,000

* Consumer Price Index Conversion Factors from <http://oregonstate.edu/cla/polisci/sites/default/files/faculty-research/sahr/inflation-conversion/pdf/cv2013.pdf>



Vegetable Crops

CROP ¹	YEAR	ACREAGE	PRODUCTION PER ACRE	TOTAL	UNIT	VALUE PER UNIT	TOTAL ²
Anise	2013	750	17.49	13,100	ton	\$697.77	\$9,141,000
	2012	638	18.23	11,600	ton	\$727.06	\$8,434,000
Artichokes	2013	5,203	5.54	28,800	ton	\$1,645.47	\$47,390,000
	2012	4,900	6.22	30,500	ton	\$1,510.93	\$46,083,000
Asparagus	2013	2,156	4.18	9,010	ton	\$1,885.25	\$16,986,000
	2012	2,304	4.17	9,610	ton	\$1,738.44	\$16,706,000
Bok Choy	2013	450	18.03	8,110	ton	\$392.52	\$3,183,000
	2012	410	21.49	8,810	ton	\$310.59	\$2,736,000
Broccoli, Bulk ^{3*}	2013	N/A	N/A	111,000	ton	\$744.76	\$82,668,000
	2012	N/A	N/A	119,000	ton	\$519.84	\$61,861,000
Fresh	2013	51,030	7.63	389,000	ton	\$885.00	\$344,265,000
	2012	49,364	7.35	363,000	ton	\$701.48	\$254,637,000
Total	2013	65,577	N/A	N/A	N/A	N/A	\$426,933,000
	2012	57,459	N/A	N/A	N/A	N/A	\$316,498,000
Cabbage, Bulk	2013	N/A	N/A	85,100	ton	\$196.17	\$16,694,000
	2012	N/A	N/A	40,000	ton	\$314.73	\$12,589,000
Fresh	2013	3,780	21.19	80,100	ton	\$354.97	\$28,433,000
	2012	3,650	22.27	81,300	ton	\$343.66	\$27,940,000
Cabbage, Total	2013	7,791	N/A	N/A	N/A	N/A	\$45,127,000
	2012	5,446	N/A	N/A	N/A	N/A	\$40,529,000

1 Organic figures included in totals

2 Totals may not calculate due to rounding

3 "Bulk" may include one or more of the following:

"Food Service" commodities are destined to be sold to restaurants and food service companies for the preparation of meals eaten away from home, and are sold in larger packages; "Processing" commodities are destined to be processed in a way that substantially alters the raw nature of the product such as freezing, drying, or cooking, and does not necessarily include processes such as washing, slicing, or chopping; and "Value Added" commodities are destined to be sold to consumers to prepare meals at home, and are sold in smaller packages with consumer labeling. Figures do not include additional cost of packaging or washing, slicing, chopping, mixing, etc.

* All "Bulk" acres were calculated using Fresh Production Per Acre



Vegetable Crops (continued)

CROP	YEAR	ACREAGE	PRODUCTION PER ACRE	TOTAL	UNIT	VALUE PER UNIT	TOTAL
Carrots, Bulk	2013	N/A	N/A	37,200	ton	\$285.90	\$10,635,000
	2012	N/A	N/A	31,100	ton	\$327.51	\$10,186,000
Fresh	2013	1,489	21.72	32,300	ton	\$424.02	\$13,696,000
	2012	1,490	21.42	31,900	ton	\$379.08	\$12,093,000
Carrots, Total	2013	3,192	N/A	N/A	N/A	N/A	\$24,331,000
	2012	2,941	N/A	N/A	N/A	N/A	\$22,279,000
Cauliflower, Bulk	2013	N/A	N/A	22,100	ton	\$663.19	\$14,656,000
	2012	N/A	N/A	19,900	ton	\$591.73	\$11,775,000
Fresh	2013	18,512	8.93	165,000	ton	\$900.99	\$148,663,000
	2012	17,733	8.74	155,000	ton	\$633.59	\$98,206,000
Cauliflower, Total	2013	20,987	N/A	N/A	N/A	N/A	\$163,319,000
	2012	20,009	N/A	N/A	N/A	N/A	\$109,981,000
Celery, Bulk	2013	N/A	N/A	37,000	ton	\$359.17	\$13,289,000
	2012	N/A	N/A	37,100	ton	\$260.33	\$9,658,000
Fresh	2013	12,600	38.12	480,000	ton	\$425.34	\$204,163,000
	2012	12,001	39.43	473,000	ton	\$388.24	\$183,638,000
Celery, Total	2013	13,570	N/A	N/A	N/A	N/A	\$217,452,000
	2012	12,941	N/A	N/A	N/A	N/A	\$193,296,000
Chard	2013	666	9.37	6,240	ton	\$962.38	\$6,005,000
	2012	676	9.44	6,380	ton	\$947.64	\$6,046,000
Cilantro	2013	1,314	5.15	6,770	ton	\$1,128.47	\$7,640,000
	2012	980	5.86	5,740	ton	\$769.27	\$4,416,000
Herbs ⁴	2013	105	7.58	796	ton	\$2,642.00	\$2,103,000
	2012	102	7.59	774	ton	\$2,580.68	\$1,997,000
Kale	2013	1,963	13.21	25,900	ton	\$858.17	\$22,227,000
	2012	1,876	12.87	24,100	ton	\$767.45	\$18,496,000
Leeks	2013	317	12.88	4,080	ton	\$1,141.39	\$4,657,000
	2012	287	12.15	3,490	ton	\$1,122.25	\$3,917,000
Lettuce, Total ⁵	2013	109,688	N/A	N/A	N/A	N/A	\$1,210,274,000
	2012	111,695	N/A	N/A	N/A	N/A	\$1,137,261,000
Misc. Vegetables, Bulk	2013	N/A	N/A	147,000	ton	\$617.05	\$90,706,000
	2012	N/A	N/A	153,000	ton	\$537.81	\$82,285,000
Fresh	2013	9,958	5.31	52,900	ton	\$1,567.03	\$82,896,000
	2012	9,006	5.60	50,400	ton	\$1,099.27	\$55,403,000
Misc. Vegetables, Total ⁶	2013	37,641	N/A	N/A	N/A	N/A	\$173,602,000
	2012	36,327	N/A	N/A	N/A	N/A	\$137,688,000

4 Includes: Oregano, Parsley, Rosemary, Sage and Thyme

5 See Lettuce Production for detail information, Page 8

6 Includes: Arugula, Beets, Broccolini, Brussels Sprouts, Cactus Pears, Cardone, Chicory, Corn, Cucumbers, Fava Beans, Frisee, Garlic, Mache, Potato, Pumpkins and Rappini.



Vegetable Crops (continued)

CROP	YEAR	ACREAGE	PRODUCTION PER ACRE	TOTAL	UNIT	VALUE PER UNIT	TOTAL
Mushrooms	2013	135	N/A	32,965,000	lbs	\$2.17	\$71,534,000
	2012	137	N/A	35,307,000	lbs	\$2.43	\$85,796,000
Napa	2013	617	32.62	20,100	ton	\$357.83	\$7,192,000
	2012	548	29.96	16,400	ton	\$297.80	\$4,884,000
Onions, Dry	2013	1,897	38.37	72,800	ton	\$219.63	\$15,989,000
	2012	2,219	24.77	55,000	ton	\$184.63	\$10,155,000
Onions, Green	2013	984	15.01	14,800	ton	\$1,280.89	\$18,957,000
	2012	1,221	15.47	18,900	ton	\$1,345.66	\$25,433,000
Parsley	2013	519	18.07	9,380	ton	\$903.59	\$8,476,000
	2012	533	16.52	8,810	ton	\$799.64	\$7,045,000
Peas ⁷	2013	1,631	N/A	N/A	N/A	N/A	\$26,737,000
	2012	1,627	N/A	N/A	N/A	N/A	\$27,393,000
Peppers ⁸	2013	1,330	19.36	25,800	ton	\$372.52	\$9,611,000
	2012	1,326	17.97	23,800	ton	\$324.12	\$7,714,000
Radicchio	2013	2,573	5.04	13,000	ton	\$1,527.76	\$19,861,000
	2012	2,794	4.64	13,000	ton	\$1,452.08	\$18,877,000
Radish	2013	150	14.37	2,160	ton	\$528.51	\$1,142,000
	2012	152	14.72	2,240	ton	\$523.21	\$1,172,000
Salad Products	2013	N/A	N/A	168,000	ton	\$420.10	\$70,577,000
	2012	N/A	N/A	182,000	ton	\$419.98	\$76,436,000
Spinach, Bulk	2013	N/A	N/A	113,000	ton	\$920.00	\$103,960,000
	2012	N/A	N/A	100,000	ton	\$1,107.00	\$110,700,000
Fresh	2013	1,540	10.43	16,100	ton	\$1,162.50	\$18,716,000
	2012	1,618	10.24	16,600	ton	\$1,204.00	\$19,986,000
Spinach, Total	2013	12,317	N/A	N/A	N/A	N/A	\$122,676,000
	2012	11,383	N/A	N/A	N/A	N/A	\$130,686,000
Spring Mix	2013	7,664	9.14	70,000	ton	\$1,002.00	\$70,140,000
	2012	6,970	9.06	63,100	ton	\$1,377.00	\$86,889,000
Squash	2013	296	10.55	3,120	ton	\$693.90	\$2,165,000
	2012	287	10.13	2,910	ton	\$605.42	\$1,762,000
Tomatoes	2013	735	18.84	13,800	ton	\$604.94	\$8,348,000
	2012	666	18.91	12,600	ton	\$568.80	\$7,167,000

VEGETABLE CROPS TOTAL	2013	302,218	\$2,833,775,000
	2012*	288,854	\$2,557,772,000

⁷ Includes: Bulk

⁸ Includes: Chili and Bell Peppers

* Adjusted figure



Lettuce Production - Detail

CROP	YEAR	ACREAGE	PRODUCTION PER ACRE	TOTAL	UNIT	VALUE PER UNIT	TOTAL
HEAD LETTUCE							
Spring	2013	12,315	---	---	---	---	---
	2012	14,445	---	---	---	---	---
Summer	2013	11,911	---	---	---	---	---
	2012	13,997	---	---	---	---	---
Fall	2013	14,305	---	---	---	---	---
	2012	16,326	---	---	---	---	---
Naked Pack	2013	N/A	N/A	7,358,000	ctn	\$12.28	\$90,356,000
	2012	N/A	N/A	6,720,000	ctn	\$10.01	\$67,267,000
Wrapped Pack	2013	N/A	N/A	23,388,000	ctn	\$13.49	\$315,504,000
	2012	N/A	N/A	24,615,000	ctn	\$10.99	\$270,519,000
Head Lettuce, Bulk	2013	N/A	N/A	348,000	ton	\$416.00	\$144,768,000
	2012	N/A	N/A	334,000	ton	\$415.00	\$138,610,000
Head Lettuce, Total	2013	44,680	1,000	44,680,000	ctn	\$12.32	\$550,628,000
	2012	44,768	1,055	47,240,000	ctn	\$10.08	\$476,396,000
LEAF LETTUCE							
Butter Leaf Lettuce	2013	810	1,229	995,000	ctn	\$8.61	\$8,567,000
	2012	1,527	1,225	1,871,000	ctn	\$8.56	\$16,016,000
Endive	2013	403	1,065	429,000	ctn	\$10.13	\$4,346,000
	2012	423	1,057	447,000	ctn	\$8.60	\$3,844,000
Escarole	2013	376	1,052	396,000	ctn	\$10.14	\$4,015,000
	2012	317	1,050	333,000	ctn	\$8.44	\$2,811,000
Green Leaf Lettuce	2013	7,813	1,043	8,149,000	ctn	\$9.27	\$75,541,000
	2012	7,792	1,042	8,119,000	ctn	\$9.31	\$75,588,000
Red Leaf Lettuce	2013	2,053	1,047	2,149,000	ctn	\$8.54	\$18,352,000
	2012	2,047	1,050	2,149,000	ctn	\$8.63	\$18,546,000
Romaine Lettuce	2013	38,793	1,021	39,608,000	ctn	\$9.63	\$381,425,000
	2012	38,485	1,019	39,216,000	ctn	\$9.77	\$383,140,000
Leaf Lettuce, Bulk	2013	N/A	N/A	270,000	ton	\$620.00	\$167,400,000
	2012*	N/A	N/A	298,000	ton	\$540.00	\$160,920,000
Leaf Lettuce, Total	2013	65,008	N/A	67,608,000	ctn	\$9.76	\$659,646,000
	2012	66,927	N/A	69,664,000	ctn	\$9.49	\$660,865,000

LETTUCE CROPS TOTAL	2013	109,688	112,288,000	ctn	\$1,210,274,000
	2012*	111,695	116,904,000	ctn	\$1,137,261,000

* Adjusted figure



Fruit & Nut Crops

CROP	YEAR	ACREAGE	PRODUCTION PER ACRE	TOTAL	UNIT	VALUE PER UNIT	TOTAL
Avocados	2013	237	6.01	1,420	ton	\$2,113.90	\$3,002,000
	2012	226	1.67	377	ton	\$1,526.87	\$576,000
Grapes (Wine) ⁹	2013	42,986	4.31	185,000	ton	\$1,226.93	\$226,982,000
	2012	45,130	3.81	172,000	ton	\$1,245.96	\$214,306,000
Lemons	2013	1,239	28.73	35,600	ton	\$417.29	\$14,856,000
	2012	1,239	29.92	37,100	ton	\$408.39	\$15,151,000
Misc. Fruit ¹⁰	2013	182	6.72	1,220	ton	\$1,204.82	\$1,470,000
	2012	195	6.94	1,350	ton	\$1,131.78	\$1,528,000
Raspberries	2013	742	9.00	6,680	ton	\$6,555.56	\$43,791,000
	2012	697	9.00	6,270	ton	\$6,595.56	\$41,354,000
Strawberries	2013	10,980	36.19	397,000	ton	\$2,161.74	\$858,211,000
	2012	11,537	32.94	380,000	ton	\$2,022.61	\$768,592,000
Processing	2013	N/A	N/A	21,700	ton	\$519.67	\$11,277,000
	2012	N/A	N/A	31,600	ton	\$511.94	\$16,177,000
Strawberries Total	2013	10,980	N/A	419,000	ton	N/A	\$869,488,000
	2012	11,537	N/A	412,000	ton	N/A	\$784,769,000

FRUIT & NUT CROPS TOTALS	2013	56,366		\$1,159,589,000
	2012	59,024		\$1,057,684,000

⁹ Represents Bearing Acres only; See Wine Grape Production for detailed information, Page 12-13

¹⁰ Includes: Apples, Blackberries, Blueberries, Kiwi, Loganberries, Olallaberries, Olives and Walnuts

Pioneering Alternatives to Fumigants | by Dan Chellemi

Strawberry production was the No. 1 segment of Monterey County's agricultural industry in 2013, but the long-term outlook for our iconic berry is in question. Methyl bromide, our most important soil fumigant for decades, is being phased out for environmental reasons, and there are increasing restrictions on alternative chemical fumigants. Clearly, California strawberries present a most compelling challenge for a new approach to stewardship and sustainability.

As an industry, we must find alternative technologies that can be integrated into the existing cropping systems. Driscoll's is a national and international leader in strawberry production and marketing. As such, we have also taken a leadership role in stewardship of the environmental resources impacted by strawberry production. The long-term goals of Driscoll's Northern District fumigant alternative research is to develop safe,

effective, economically feasible, and environmentally friendly pest management systems and outreach strategies to replace methyl bromide in strawberry production.

Our primary strategy involves individual pest control tactics that can be combined into a systematic approach to manage soilborne diseases such as Fusarium and Verticillium wilt. These wilt diseases, which also affect many other crops, weaken or kill strawberry plants and significantly impact their fruit quality. Concurrently, we also aim to improve soil fertility to ensure the sustainability of agricultural production in the Salinas and Pajaro Valleys.

To accomplish these goals, Driscoll's is conducting on-farm, commercial-scale research in combination with greenhouse experiments, economic analyses and educational outreach activities. Our collaborators include researchers from the University of California at Santa Cruz,

UC Davis, UC Cooperative Extension, and the USDA Agricultural Research Station.

Our tactics are innovative and unusual, to say the least. They include the application of recycled agricultural waste products such as rice bran, grape pumice, crab and shrimp meal, along with beneficial crop rotations such as broccoli and brussel sprouts. Long-term field trials with lettuce and strawberry growers were initiated in 2013. We're evaluating the results using bacterial and fungal rDNA fingerprinting techniques.

While it's too soon to say how effective these non-chemical fumigant alternatives may prove to be, we are committed to develop new pest control methods that benefit both conventional and organic strawberries in California for generations to come.



Conservation District Helps Farmers Maintain a Natural Balance

by Paul Robins

Government advocacy for preserving our land, air, and water goes back to the Dust Bowl days of the 1930s and one of the great farmland and social disasters of all time. It led to creation of the USDA Soil Conservation Service (now the Natural Resources Conservation Service, or NRCS). And in turn, that prompted the formation of farmer-led, local conservation districts, including the first soil conservation district in Monterey County in 1942.

Monterey County was well-suited for the effort, since it boasts some of the greatest plant and animal biodiversity in the world, as well as possibly the richest and most productive soil in agriculture. In the 1990's, the Monterey district initiated the state's flagship permit coordination program in the Elkhorn Slough watershed. This brought together federal, state and local permitting agencies to help reduce cost and paperwork roadblocks to conservation projects.

Today's Resource Conservation District of Monterey County (RCDMC) understands that even when farmers embrace the good stewardship practices described in this edition of the Monterey County Crop Report, conservation is more easily said than done. So our goal is to act as a hub of local leadership, coordinating the work of conservation professionals with innovative growers.



Water Conservation

- **Drip irrigation** helps growers reduce their overall water use.
- Innovative use of **retention ponds** helps to reduce erosion and siltation, avoiding water quality impairments.
- **Soil moisture sensors** remotely monitor water needs to help growers track water use for optimizing irrigation efficiency.
- **Laser leveling** enables uniform distribution of inputs, such as water and fertilizer, thus reducing costs.
- **Rainwater collection** allows for water reuse in greenhouses and vineyards.



Pest Management

- With **integrated pest management**, growers combine pest prevention, monitoring and suppression to avoid risks to water, soil, air, plants and animals.
- Growers conduct **pesticide trials** to determine the appropriate and most efficient use of pesticides.
- **Beneficial insects** help growers manage pest populations in their fields.



Soil Health

- **Compost** enriches soil, reduces waste, suppresses pathogens, and increases the soil's ability to hold water.
- **Cover crops** reduce erosion, increase soil organic matter, and provide 'green' fertilizer by adding nitrogen into the soil to attract beneficial insects to crops.
- **Soil testing** informs growers about nutrients in their soil to guide amendments such as fertilizer applications.

Wildlife Integration

- **Vegetated waterways** have more stable banks, slow the movement of water, and trap sediments while providing habitat for wildlife.
- **Owl boxes** and **raptor roosts or perches**, host owls and other raptors that hunt prey in fields.
- **Buffer strips** slow runoff and trap sediment, fertilizers, pesticides, pathogens and heavy metals.
- **Hedgerows** act as windbreaks, provide wildlife habitat, and host beneficial insects when coupled with a buffer strip. They can also filter runoff and sediment between fields.



Our role has become increasingly important as Monterey County farms have evolved into more complex operations with equally complex reporting requirements. Growers also must balance greater production demands against the need to protect local water quality, wildlife habitat, and soil health. It's a dynamic and challenging environment for local agriculture.

To meet these demands, the RCDMC and NRCS have partnered with area universities and non-profits to test novel configurations and varieties of cover crops, waterways, vegetation management and other technologies for protecting soil and water quality on farms.

Waste Reduction

- **Recycling facilities** receive and often upcycle agricultural waste into useable materials, processing millions of tons of agricultural plastic annually.
- Growers either **reuse or recycle** their drip tape, mulch plastic and packaging materials whenever possible.
- Growers hold employee education campaigns aimed at **reducing** various waste streams generated by their operations.



The region is also home to the nationally-renowned Agricultural Water Quality Alliance, formed by a unique partnership involving the agricultural and conservation communities and the Monterey Bay National Marine Sanctuary. The Sanctuary's Ag and Rural Lands Plan helps protect one of the world's most prized land and seascapes.

On a daily basis, the RCD and NRCS provide field-by-field confidential, technical guidance and even financial assistance for farmers and land managers who want to fine-tune how they address challenges on their lands. With specialists trained in agronomy, agricultural engineering, landscape architecture, and plant and soil sciences, we are skilled at addressing a range of issues, from irrigation efficiency to wildlife habitat improvements.

After working with conservation-minded farmers in Monterey County for more than seven decades, we want to commend them for their record of success.

Find more information at: www.rcdmonterey.org

Ranching

- **Rotational grazing** allows ranchers to more evenly graze a landscape, optimizing forage quality and availability, which can help disperse nutrients and suppress noxious weeds and erosion.
- **Perennial grasses**, enhanced by rotational grazing, have long roots that stabilize soil, reduce erosion, suppress weeds, and provide longer-lasting forage.
- Ranches typically contain **wildlife corridors** that facilitate the movement and survival of wildlife via connected habitat.





Wine Grape Production

WHITE GRAPE VARIETIES	HARVESTED ACRES	AVERAGE PRICE PER TON	TOTAL TONS	TOTAL VALUE
Chardonnay	16,606	\$1,167	67,850	\$79,181,000
Riesling	2,019	\$943	10,255	\$9,670,000
Pinot Gris	1,367	\$1,121	5,898	\$6,612,000
Sauvignon Blanc	1,039	\$1,048	4,400	\$4,611,000
Gewurztraminer	630	\$893	5,113	\$4,566,000
Muscat Canelli	160	\$1,010	897	\$906,000
Gruner Veltliner	36	\$1,105	665	\$735,000
Albarino	26	\$1,263	379	\$479,000
Vioginier	130	\$1,779	237	\$422,000
Pinot Blanc	100	\$1,060	295	\$313,000
Chenin Blanc	150	\$893	272	\$243,000
Other Whites ¹¹	72	\$1,163	95	\$110,000
Roussanne	30	\$2,197	27	\$59,300

RED GRAPE VARIETIES	HARVESTED ACRES	AVERAGE PRICE PER TON	TOTAL TONS	TOTAL VALUE
Pinot Noir	7,963	\$1,735	37,219	\$64,575,000
Merlot	5,264	\$1,025	23,069	\$23,646,000
Cabernet Sauvignon	4,494	\$1,062	17,206	\$18,273,000
Syrah/Shiraz	1,704	\$1,034	6,560	\$6,783,000
Petite Sirah	260	\$1,168	1,165	\$1,361,000
Grenache	123	\$1,527	833	\$1,272,000
Malbec	205	\$1,014	1,165	\$1,181,000
Petit Verdot	130	\$1,355	313	\$424,000
Zinfandel	117	\$1,065	354	\$377,000
Gamay-Napa	30	\$1,030	262	\$270,000
Other Reds ¹²	239	\$1,543	175	\$270,000
Sangiovese	35	\$904	289	\$261,000
Tannant	35	\$1,275	203	\$259,000
Barbera	22	\$1,024	120	\$123,000

¹¹ Arneis, Grenache Blanc, Malvasia Bianca, Marsanne, Muscat Blanc, Muscat Orange, Sauvignon Musque, Semillon, Tocai Friulano, Vermentio and White Zinfandel

¹² Aleatico, Alicante, Bouschet, Cabernet Franc, Carignane, Cinsaut, Dolcetto, Dornfelder, Mataro, Mouvedre, Muscat Hamburg, Negrette, Pfeffer Cabernet, Primitivo, Ruby Cabernet, Souzao, Tempranillo, Teroldego, Tinta Cao, Tourga Nacinal, Touriga Francesca, Trousseau and Valdiguie

Wine Grape Production (continued)

YEAR	NONBEARING ACRES	BEARING ACRES	TOTAL TONS	VALUE
2003	2,829	34,287	151,344	\$160,219,000
2004	1,036	36,614	172,082	\$174,380,000
2005	2,378	38,179	269,000	\$254,615,000
2006	3,144	38,165	210,000	\$217,983,000
2007	3,068	39,636	224,000	\$251,604,000
2008	4,006	40,144	201,000	\$238,366,000
2009	3,975	40,792	204,000	\$238,082,000
2010	2,572	43,321	177,000	\$172,916,000
2011	2,006	43,034	124,000	\$140,976,000
2012	1,936	45,130	172,000	\$214,306,000
2013	1,531	42,986	185,000	\$226,982,000

Blending Wine Sustainability | by Steve McIntyre

There's been a lot of discussion about the challenges facing coastal wine grape growers, from water to soil to land use restrictions. But where others see obstacles, some of us see a "Green Gold Rush" in the Monterey area, with stewardship as key to our optimistic outlook.

As a third generation farmer, I am encouraged because good stewardship and sustainability practices support a "triple bottom line" – people, planet, profit – that will serve us well in the long run.

Here at Monterey Pacific Inc., we embrace the idea that environmental, economic and social benefits are not just compatible, they are actually essential for long-term success. We blend organic, biodynamic, and conventional production methods with an eye toward that "triple bottom line" and into that blend we pour good science and a willingness to innovate.

For example, a few years back we began preparations to plant a vineyard on a 240-acre parcel in Greenfield. Traditional thinking dictated that soil preparation would

begin in the fall. Vineyard "groundwork" can be an arduous, labor-intensive process but we wondered – what if we prepared the ground in spring? Our soil scientist did some research. We found and tested new, high-tech ripping equipment and we discovered that spring preparation compacted the soil less, promoted more vine growth the first year, allowed direct application of soil amendments, and cost less. Less compacted soil reduced the cost of hand-staking by 50 percent. The ability to measure such benefits is part of a good stewardship model.

We are far from alone in stewardship efforts. The Central Coast Vineyard Team is a network of 300 farmers that has educated and guided sustainable vineyard practices for 15 years. (<http://www.vineyardteam.org/>) As part of that collective effort, we developed the Sustainability in Practice (SIP) Program.

Monterey Pacific and a number of other Monterey County vineyards were among the first in the state to be certified under the SIP Program since it was created in 2008. Today, nearly 30,000 acres are



eligible for SIP certification and 500,000 cases of wine bearing the SIP seal are produced in Monterey County.

We can and will market stewardship, but it is not a prize to be won. Rather, it's a practice of purposeful reflection and improvement.



Field Crops

CROP	YEAR	ACREAGE	PRODUCTION PER ACRE	TOTAL	UNIT	VALUE PER UNIT	TOTAL
Barley, Grain	2013	7,148	0.47	3,360	ton	\$280.00	\$941,000
	2012	5,712	1.25	7,140	ton	\$200.89	\$1,434,000
Beans ¹³	2013	525	1.30	683	ton	\$1,684.91	\$1,151,000
	2012	510	1.45	739	ton	\$1,661.99	\$1,228,000
Hay, Alfalfa	2013	180	6.00	1,080	ton	\$279.94	\$302,000
	2012	200	6.87	1,370	ton	\$200.42	\$275,000
Misc. Field Crops ¹⁴	2013	1,995	1.69	3,370	ton	\$100.00	\$337,000
	2012	1,025	1.61	1,650	ton	\$121.65	\$201,000
Oats ¹⁵	2013	365	1.95	712	ton	\$234.11	\$167,000
	2012	1,092	2.12	2,320	ton	\$216.00	\$501,000
Rangeland	2013	1,065,698	N/A	N/A	acre	\$16.00	\$17,051,000
	2012	1,065,698	N/A	N/A	acre	\$14.50	\$15,453,000
Wheat, Grain	2013	290	0.84	244	ton	\$169.02	\$41,200
	2012	550	1.90	1,050	ton	\$234.73	\$246,000

FIELD CROPS TOTAL	2013	1,076,201		\$19,990,000
	2012	1,074,787		\$19,338,000

13 Includes: Peruano, Pintos, Pink, Pinquito and Lima Beans

14 Includes: Safflower, Pasture and Barley

15 Includes: Hay Oats and Misc. Oats



Seed Production

CROP	YEAR	ACREAGE	PRODUCTION PER ACRE	TOTAL	UNIT	VALUE PER UNIT	TOTAL
Bean Seed, All	2013	2,314	0.87	2,010	ton	\$3,488.59	\$7,012,000
	2012	2,382	0.73	1,740	ton	\$3,338.05	\$5,808,000
Misc. Seed ¹⁶	2013	765	0.87	666	ton	\$2,689.44	\$1,791,000
	2013	1,148	0.88	1,010	ton	\$2,714.55	\$2,742,000

SEED PRODUCTION TOTAL	2013	3,079					\$8,803,000
	2012	3,530					\$8,550,000

Apiary Production

CROP	YEAR	COLONIES	PRODUCTION	UNIT	VALUE PER UNIT	TOTAL
Honey	2013	N/A	14,500	lbs	\$2.10	\$30,500
	2012	N/A	16,100	lbs	\$1.93	\$31,100
Pollination ¹⁷	2013	2,940	N/A	colony	\$55.00	\$162,000
	2013	3,615	N/A	colony	\$47.00	\$170,000
Wax	2013	N/A	700	lbs	\$4.25	\$2,980
	2012	N/A	750	lbs	\$4.25	\$3,190

APIARY PRODUCTION TOTAL	2013					\$195,000
	2012					\$204,000

¹⁶ Includes: Barley, Broccoli, Carrots, Cauliflower, Celery, Corn, Cucumber, Flowers, Kohlrabi, Onions, Peas, Peppers, Radish, Soybean and Squash.
¹⁷ Seed Crops: Broccoli, Carrot, Cauliflower, Cucumber, Flower, Onion, Pepper, Radish, and Squash; Raspberry Fruit

“I use a mixture of oats, bell beans, peas and vetch cover crops because it improves the tilth of the soil, which improves production.”

– Burton Silva



Cut Flowers & Cut Foliage

CROP	YEAR	ACREAGE	PRODUCTION QUANTITY SOLD	UNIT	VALUE PER UNIT	TOTAL
Alstroemeria	2013	3.74	57,000	per bunch	\$2.01	\$115,000
	2012	2.64	55,900	per bunch	\$1.65	\$92,200
Asiatic Lily	2013	1.00	59,400	per bunch	\$4.01	\$238,000
	2012	1.41	98,600	per bunch	\$4.22	\$416,000
Carnations	2013	6.48	2,281,000	per bloom	\$0.18	\$411,000
	2012	6.91	2,450,000	per bloom	\$0.18	\$441,000
Chrysanthemums	2013	27.21	3,804,000	per bloom	\$0.65	\$2,473,000
	2012	28.64	2,926,000	per bloom	\$0.49	\$1,434,000
Eucalyptus	2013	74.51	208,000	per bunch	\$1.63	\$339,000
	2012	74.00	276,000	per bunch	\$1.62	\$447,000
Gerbera	2013	9.53	5,020,000	per bloom	\$0.39	\$1,958,000
	2012	9.42	5,062,000	per bloom	\$0.51	\$2,582,000
Iris	2013	8.98	198,000	per bunch	\$2.76	\$546,000
	2012	9.82	233,000	per bunch	\$2.74	\$638,000
Miniature Carnations	2013	4.16	111,000	per bunch	\$1.42	\$158,000
	2012	4.26	117,000	per bunch	\$1.41	\$165,000
Misc. Cut Flowers & Cut Foliage ¹⁸	2013	194.60	15,964,000	various	\$1.83	\$29,214,000
	2012	213.48	17,562,000	various	\$1.78	\$31,260,000
Oriental Lilies	2013	3.66	121,000	per bunch	\$9.61	\$1,163,000
	2012	3.78	165,000	per bunch	\$9.27	\$1,530,000
Roses	2013	13.40	3,071,000	per bloom	\$0.93	\$2,856,000
	2012	11.65	3,945,000	per bloom	\$0.64	\$2,525,000
Snapdragon	2013	13.29	359,000	per bunch	\$3.93	\$1,411,000
	2012	15.73	446,000	per bunch	\$3.59	\$1,601,000
Tulips	2013	2.17	35,900	per bunch	\$4.75	\$171,000
	2012	1.70	31,100	per bunch	\$4.56	\$142,000

CUT FLOWERS & CUT FOLIAGE TOTAL	2013	363	\$41,053,000
	2012	383	\$43,273,000

¹⁸ Includes: Acidanthera, Amaranthus, Anemones, Anthurium, Asters, Azalea, Banksia, Belladonna, Bulperum, Calendula, Calla Lily, Coleus, Curly Willow, Cyclamen, Daffodils, Dahlias, Delphinium, Ferns, Freesia, Gardenia, Gladiolus, Godetia, Grasses, Heather, Hydrangea, Impatiens, Kale, Kangaroo Paw, Larkspur, Lavender, Leather Leaf, Leptospermum, Leucodendron, Leucospermum, Limonium, Lisianthus, Marigold, Oxalis, Portulaca, Protea, Ranunculus, Safflower, Scabiosa, Solidaciocis, Statice, Stock, Sunflower, Sweet Peas, Tuberose, Viburnum, Yarrow and Zantedeschia

Nursery Products

CROP	YEAR	ACREAGE	PRODUCTION QUANTITY SOLD	UNIT	VALUE PER UNIT	TOTAL
Bedding Plants	2013	135.57	23,315,000	per plant	\$1.34	\$31,242,000
	2012	142.57	27,010,000	per plant	\$0.63	\$17,016,000
Misc. Nursery Products ¹⁹	2013	397.58	7,693,000	various	\$1.89	\$14,540,000
	2012	388.70	28,146,000	various	\$0.95	\$26,739,000
Orchids	2013	75.57	10,647,000	per plant	\$6.08	\$64,734,000
	2012	106.49	12,589,000	per plant	\$5.87	\$73,897,000
Poinsettia	2013	55.01	1,974,000	per plant	\$4.60	\$9,080,000
	2012	74.17	2,577,000	per plant	\$4.97	\$12,808,000
Potted Plants	2013	216.34	14,450,000	per plant	\$2.87	\$41,472,000
	2012	261.85	18,004,000	per plant	\$2.91	\$52,392,000
Propagative Materials	2013	10.05	1,934,000	per plant	\$0.57	\$1,102,000
	2012	11.03	3,133,000	per plant	\$0.44	\$1,379,000
Vegetable Transplants	2013	83.07	2,099,985,000	per plant	\$0.05	\$104,999,000
	2012	84.46	1,899,785,000	per plant	\$0.04	\$75,991,000
Woody Ornamentals	2013	37.25	852,000	per plant	\$4.84	\$4,124,000
	2012	42.00	1,002,000	per plant	\$4.04	\$4,048,000
Nursery Products Total Acres	2013	1,010	---	---	---	\$271,293,000
	2012	1,111	---	---	---	\$264,270,000

OVERALL NURSERY²⁰ TOTAL	2013	1,373		\$312,346,000
	2012	1,494		\$307,543,000

Livestock & Poultry

CROP	YEAR	ACREAGE	PRODUCTION	UNIT	VALUE PER UNIT	TOTAL
Cattle & Calves	2013	41,700	173,000	cwt	\$179.00	\$30,967,000
	2012	43,250	283,000	cwt	\$136.50	\$38,630,000
Stocker	2013	40,000	71,000	cwt	\$38.00	\$2,698,000
	2012	42,000	122,000	cwt	\$37.00	\$4,514,000
Sheeps & Lambs	2013	2,300	2,850	cwt	\$110.00	\$314,000
	2012	2,600	3,510	cwt	\$100.00	\$351,000
Hogs	2013	1,100	297,000	lbs	\$0.83	\$247,000
	2012	1,450	326,000	lbs	\$0.75	\$245,000
Wool	2013	N/A	10,500	lbs	\$0.47	\$4,940
	2012	N/A	14,000	lbs	\$0.45	\$6,300
Misc. Livestock ²¹ & Poultry ²² Products	2013	---	---	---	---	\$10,793,000
	2012	---	---	---	---	\$9,380,000

LIVESTOCK & POULTRY TOTAL	2013		\$45,024,000
	2012		\$53,126,000

19 Includes: Begonia, Bromeliads, Bulbs, Christmas Trees, Clivia, Corms, Cypress, Euonymus, Ficus, Fruit & Nut Trees, Jasmine, Milkweed, Myrtle, Native Plants, Rhizomes, Tubers, Turf and Water Pond Plants

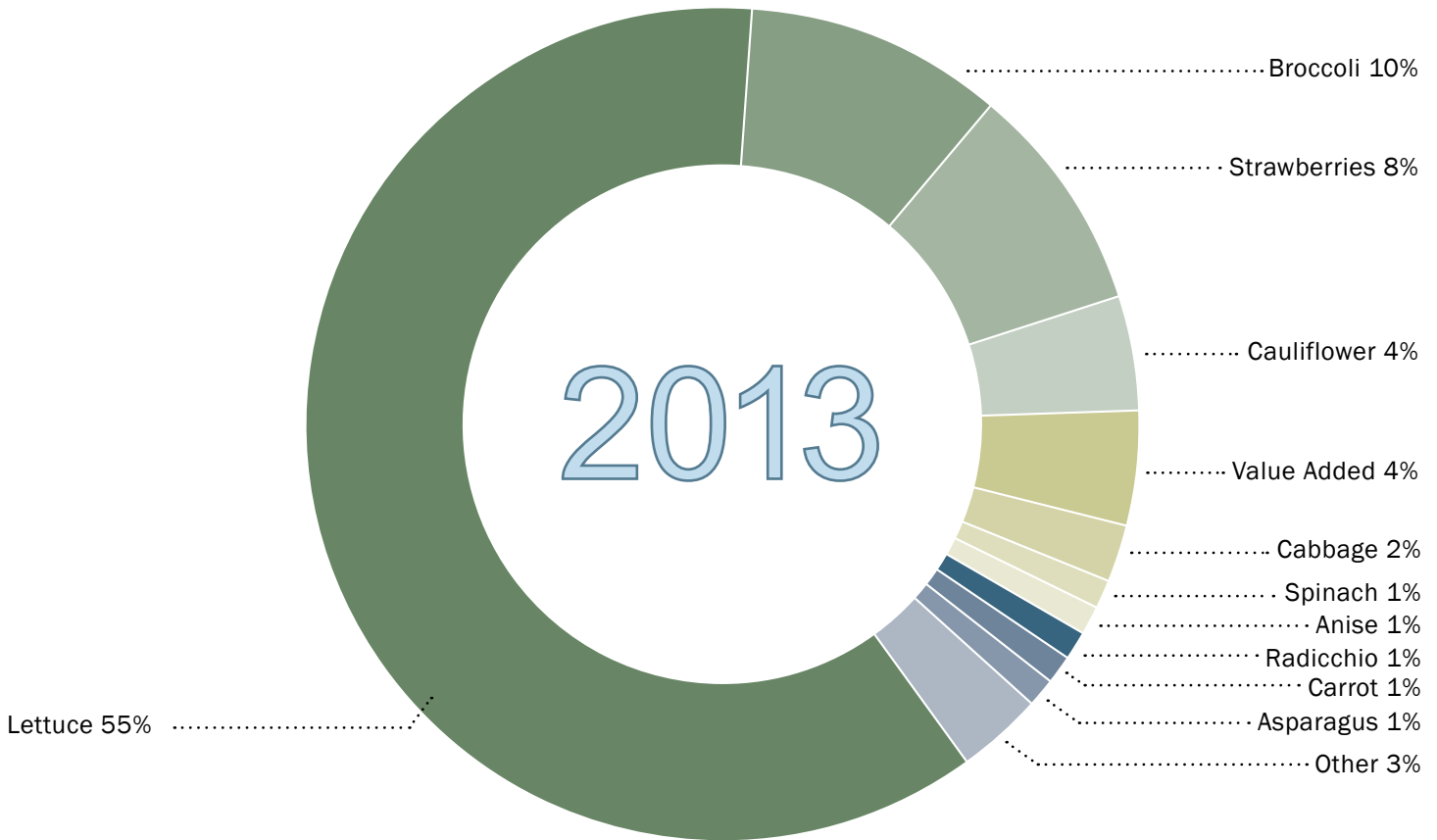
20 Totals from Cut Flower & Cut Foliage and Nursery Products

21 Includes: Bulls, Cull Cows, Dairy Cows, Milk Manufacturing and Market Milk

22 Includes: Eggs, Fertilizer, Hatcheries and Poultry



Produce Exports by Commodity



2013 EXPORTED COMMODITIES	
Lettuce 435,940,555 lbs	Spinach 9,291,000 lbs
Broccoli 80,714,976 lbs	Anise 6,741,860 lbs
Celery 73,566,974 lbs	Radicchio 5,677,018 lbs
Strawberries 61,768,632 lbs	Carrot 4,728,270 lbs
Value Added 33,989,375 lbs	Asparagus 4,106,889 lbs
Cauliflower 29,308,321 lbs	Seeds 3,669,928 lbs
Cabbage 12,210,950 lbs	Other+ 23,972,784 lbs

2012 EXPORTED COMMODITIES	
Lettuce 393,584,035 lbs	Spinach 8,787,790 lbs
Broccoli 94,194,706 lbs	Anise 7,125,385 lbs
Celery 80,469,360 lbs	Radicchio 5,501,668 lbs
Strawberries 53,089,400 lbs	Carrot 4,456,350 lbs
Cauliflower 25,183,413 lbs	Asparagus 4,403,306 lbs
Value Added 24,985,408 lbs	Seeds 3,505,227 lbs
Cabbage 14,965,640 lbs	Other+ 19,967,840 lbs

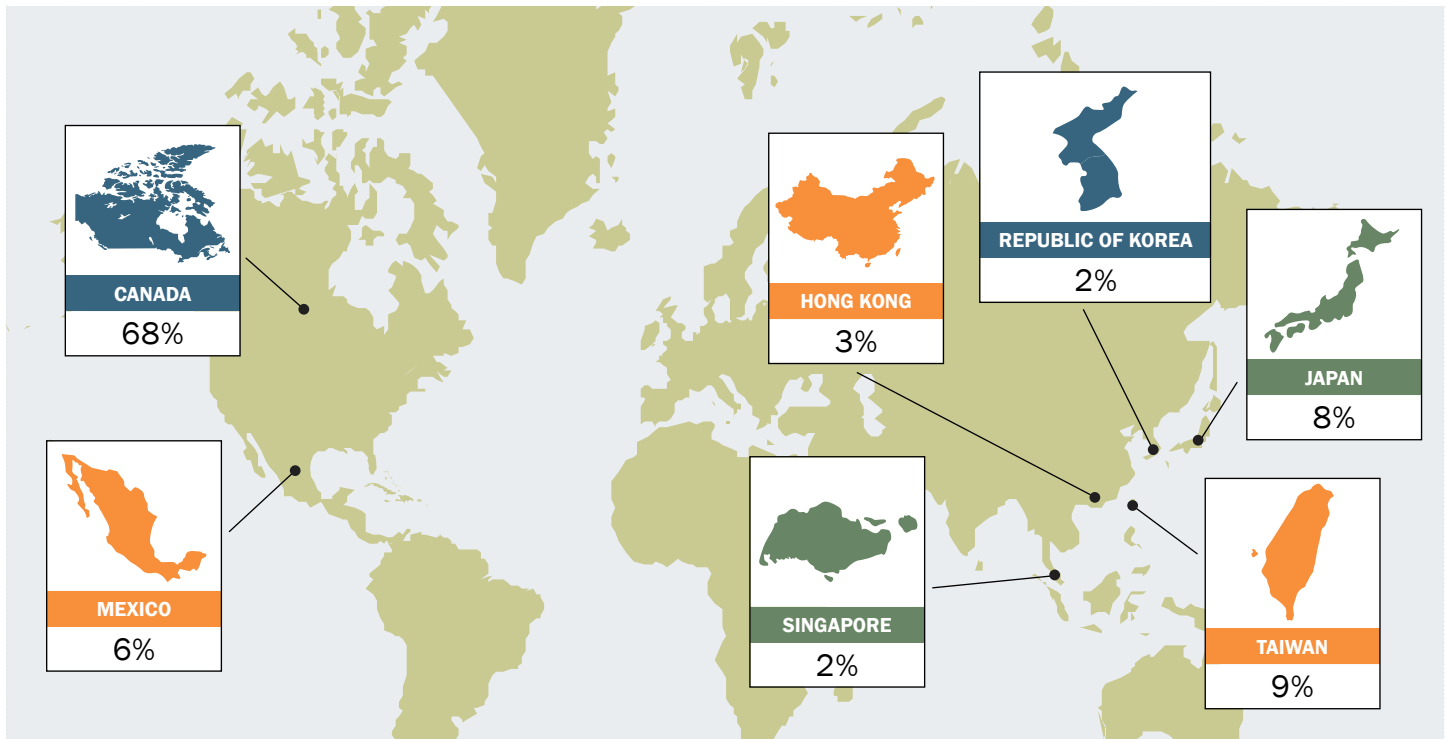
Total 785,687,532 lbs

Total 740,219,528 lbs

+ Nursery now reported in Other



Agricultural Exports Trade Partners



2013 TOTAL lbs		
Canada 540,665,339	Panama 1,285,439	Saipan 142,588
Taiwan 72,836,342	Australia 734,149	Jamaica 122,784
Japan 62,895,823	New Zealand 480,524	Indonesia 111,080
Mexico 46,786,052	United Arab Emirates 441,156	Colombia 91,203
Hong Kong 26,262,216	French Polynesia 348,282	Philippines 55,704
Republic of Korea 15,384,451	Malaysia 252,000	Sri Lanka 37,287
Singapore 12,773,522	Brazil 201,250	South Africa 32,691
EUN 8,362,446	Kuwait 195,996	Chile 19,689
Puerto Rico 6,088,569	Saudi Arabia 166,840	Guatemala 14,262

2012 TOTAL lbs		
Canada 485,962,287	Panama 1,477,331	United Arab Emirates 454,763
Japan 80,677,198	China 1,308,627	Saudi Arabia 401,920
Taiwan 74,805,425	India 693,855	Thailand 257,163
Mexico 35,271,745	Vietnam 646,089	Malaysia 252,000
Hong Kong 25,400,281	Australia 622,068	Bahrain 245,784
Republic of Korea 18,781,247	New Zealand 611,076	Indonesia 213,974
Singapore 11,739,524	Philippines 545,481	Colombia 144,294
EUN 7,832,687	French Polynesia 466,906	Honduras 76,244
Puerto Rico 6,218,125	Kuwait 464,440	South Africa 74,188

Organic Production Registered in Monterey County

YEAR	PRODUCERS	ACRES	RANGELAND	GROSS SALES
2013	131	33,381	12,611	\$214,437,216
2012	131	22,288	9,842	\$182,656,557
2011	113	19,863	9,929	\$170,352,183
2010	87	19,945	9,000	\$168,956,060
2009	93	17,581	—	\$163,883,296
2008	98	18,106	—	\$196,081,000
2007	111	17,653	—	\$201,541,000
2006	111	17,357	—	\$226,465,742
2005	95	16,410	—	\$208,659,519
2004	100	14,073	—	\$134,082,965
2003	100	13,461	—	\$128,252,029

The number of organic farms, value of commodities and organic acreage in Monterey County continues to increase yearly. These farms produce a wide array of commodities and utilize standards defined in the California Organic Products Act of 2003 and the Federal Organic Foods Production Act of 1990. Top organic commodities in Monterey County include: strawberry, leaf lettuce, raspberry, spinach, salad mix and broccoli. Organic farms in Monterey County range in size from very small to very large.

Tracing Family Roots in Partnership | by Diana McClean



The Tanimura & Antle story bridges a cultural divide to achieve a level of success only possible after great trial.

George Tanimura, the Tanimura family patriarch, demonstrated resilience, honor and pride when he led his siblings into the forced U.S. internment camp for Japanese residents during WWII, while supporting his brothers' U.S. military service fighting the Japanese. Upon release, George rebuilt the family farming business in post-WWII Salinas.

Bud Antle, the Antle family patriarch, was a visionary, an inventor and a savvy business man with the rare courage to reach out to the Tanimura family.

Bob Antle, Bud's son, led the company following his father's unexpected early passing and continued the friendship and business relationship with the Tanimura family. Bob and George ultimately forged the

formal partnership of Tanimura & Antle, Inc. in 1982.

Sown in trust and in each family's demonstrated values, the partnership reaps longevity. Led today by its third generation, it continues as one of the most respected family-owned and operated farms.

Farming families are the original stewards of the land. Without attention to the preservation of the land, water, and natural resources, farmers couldn't consistently grow fresh vegetables while also providing for their families and employees. Post-war development of vacuum cooled iceberg lettuce and the innovative Bug Vac in the 1980's are just two examples of Tanimura & Antle developments designed to preserve limited resources.

"We represent the most basic tenants of old-school farm stewardship – tradition, perseverance, and respect for people and

the land. It is those qualities that have sustained us thus far, and I am confident they will sustain us for years to come," comments Bob's son Mike Antle.

Walk the hallways of Tanimura & Antle and you'll find many generations and branches of employees' families, including over 200 employees serving for over 20 years. Check the donation records and note a well-known contributor to community and educational programs that support the future of agriculture, the health of their communities' children and the social services that help those in need.

Roots are real and symbolic in the family, from vegetable roots seeking sustenance, to the family tree that built the business' success. "We continually strive to be open-minded and smart, to build collaborative partnerships with an eye toward the future. The roots of Tanimura & Antle run deep in Monterey County," concludes Mike.



Summary of Pest Management Activities

PEST	AGENT / MECHANISM	SCOPE OF PROGRAM ¹
COUNTY BIOLOGICAL CONTROL		
Yellow Starthistle*, <i>Centaurea solstitialis</i>	Seedhead Weevils/Fly <i>Bangasternus orientalis</i> , <i>Eustenopus villosus</i>	47 sites
Italian Thistle, <i>Carduus</i> spp.	<i>Urophora sirunaseva</i> , <i>Larinus curtus</i> ,	
Russian Thistle, <i>Salsola australis</i>	Seedhead weevil, <i>Rhinocyllus conicus</i> ,	General Distribution
Puncture Vine, <i>Tribulus terrestris</i>	Leaf & stem mining moths, <i>Coleophora</i> spp.	General Distribution
Ash Whitefly, <i>Siphoninus phillyreae</i>	Stem & Seed weevils, and <i>Microlarinus</i> spp.	General and Local Distribution
	Parasitic wasp, <i>Encarsia inaron</i>	General Distribution
* The hairy seedhead weevil, <i>Eustenopus villosus</i> , is available for release to individual properties with yellow starthistle infestations. Call for arrangements.		
PEST ERADICATION		
Scotch Thistle, <i>Onopordum acanthium</i>	Mechanical/Chemical	One Infestation
Skeletonweed, <i>Chondrilla juncea</i>	Mechanical/Chemical	One Infestation
Puna Grass, <i>Achnatherum brachychaetum</i>	Mechanical/Chemical	Nine Infestations
Hydrilla (<i>Hydrilla verticillata</i>), and biddy-biddy (<i>Acaena novae-zelandiae</i>) have been eradicated.		
PEST MANAGEMENT		
Roadside (virus host) Weeds		
Roadside, Targeted Noxious Weeds	Chemical	County right-of-ways, spot treatment
Puna Grass, <i>Achnatherum brachychaetum</i>	Chemical	County right-of-ways, boom & spot treatment
Lettuce Mosaic Virus	Virus-Free Seed	Indexing of all county-planted seed
Lettuce Mosaic Virus	Host-Free Period	No lettuce above ground 12/7-12/21
Celery Mosaic Virus	Host-Free Period	No celery above ground in January
Lettuce Root Aphid	Host-Free District	Lombardy poplar prohibition
PEST DETECTION/EXCLUSION		
Pest detection is the systematic search for pests outside of a known infested area, or for pests not known to occur in California. The general goal is to detect pests before they become established over an area so large that eradication is no longer biologically or economically feasible. Pest exclusion refers to the process of denying entry of pests into an area by routine inspection of incoming plant shipments and rejection of infested material. Detection trapping is performed primarily by the County Agricultural Commissioner's offices.		
TARGET PEST	INSECT HOSTS	NO. OF TRAP SERVICINGS
Medfly	Fruit Trees	2,496
Melon Fruit Fly	Vegetable Gardens	953
Mexican Fruit Fly	Fruit Trees	2,173
Oriental Fruit Fly	Fruit Trees	2,496
Misc. Fruit Flies	Fruits and Vegetables	953
Gypsy Moth	Shade Trees	410
Japanese Beetle	Turf, Roses	388
Trogoderma Beetle	High Hazard Commodities	16
Glassy Winged Sharpshooter	Nurseries/Vineyards/Urban Areas	8,537
Light Brown Apple Moth	Ornamental/Commercial Crops	3,419
European Grapevine Moth	Grapes	23,419
Asian Citrus Psyllid	Citrus	2,721
Pest detection trapping activities accounted for 12,059 hours, with a total of 47,981 trap services being made. Ten hours were applied to inspecting 17 commercial crop sites of 5 net/ 212.5 gross acres. Thirty-three and a half hours were utilized on inspection/identification of public-reported pests. Fifteen high hazard locations were inspected and 89 miles of entryways surveyed, accounting for 57.5 and 33.5 hours respectively. Special surveys were made for exotic invasive weeds, Africanized honeybee, karnal bunt, mint beetle, citrus greening disease, sudden oak death disease, Asian citrus psyllid, brown marmorated stink bug, and glassy-winged sharpshooter.		

¹ Represents total number of individual sites, plants, etc. incorporated in program effort (surveys, collection, releases, etc.).





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