MONTEREY COUNTY

2016 CROP REPORT

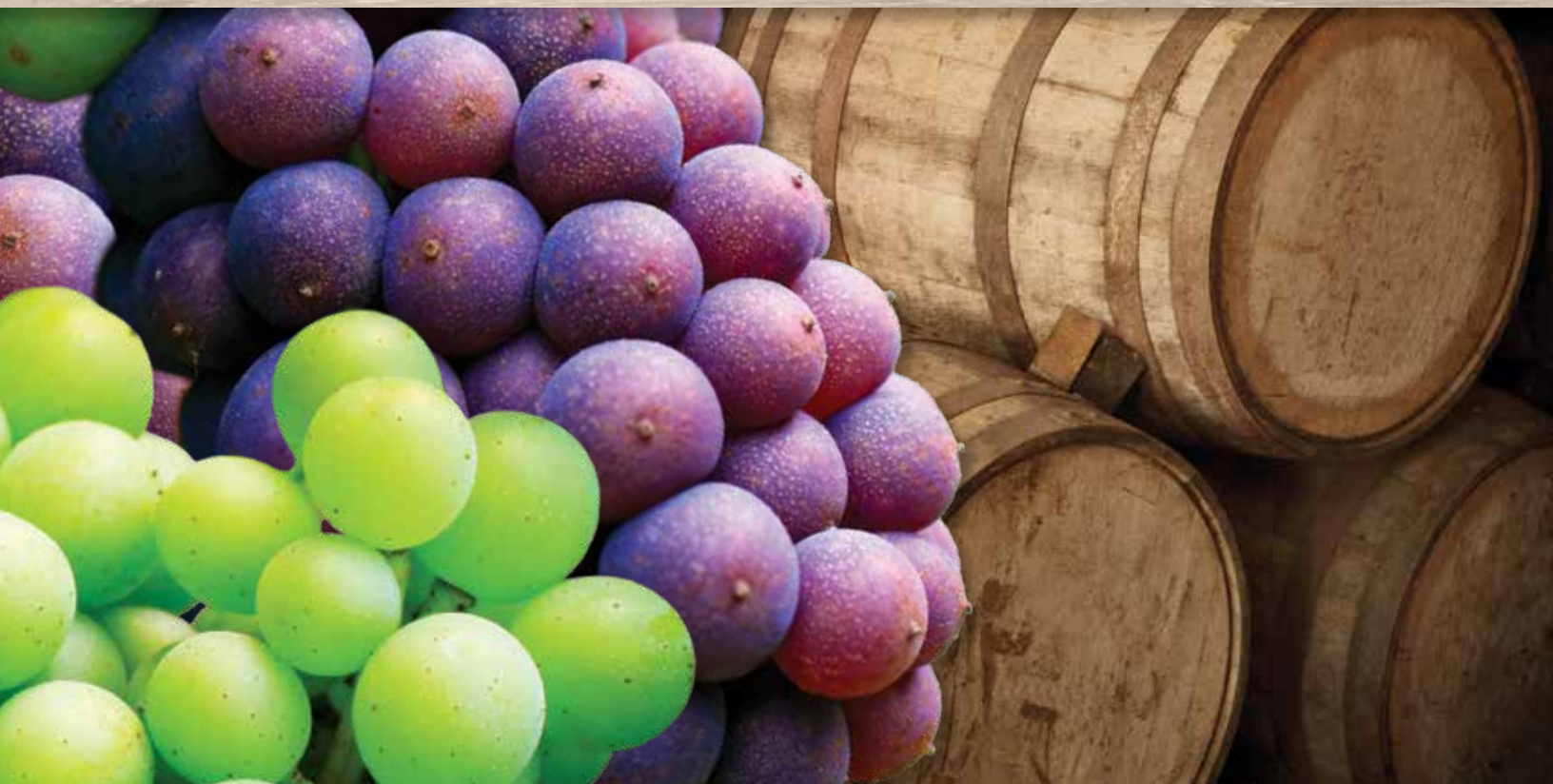

TABLE OF CONTENTS

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ERIC LAURITZEN
Agricultural Commissioner

It is a pleasure to present the 2016 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 $4.25 billion for Monterey County, which is a decrease of 9.5% or $449 million under the previous year.

Crop values vary from year to year based on production, market and weather conditions. The decrease in total crop value in 2016 is primarily the result of market conditions. Eight of the County's top ten crops had notable decreases, largely due to low market volatility, stable production, but stagnant prices. Head lettuce and leaf lettuce declined nearly 25% and 10% respectively. Total nursery crop value declined by 12%, in part because many greenhouses are being transitioned to medical Cannabis production. The value of our strawberry crop is nearly unchanged from the previous year.

Each year we like to highlight a segment of the industry in our report and this year chose wine grapes. The wine grape industry was the lone standout among the top ten crops in 2016 with a 28.5% increase, after a below-average year in 2015. A short film on Monterey County viticulture can be found on our Department's website. The film highlights different aspects of the wine industry with interviews describing the evolution of the wine industry in Monterey County. Many thanks to Kim Stemler from the Monterey County Vintners and Growers Association for her numerous contributions to this report.

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 input costs, such as fuel, fertilizers and packaging, nor can they significantly affect market prices.

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, Christina McGinnis, Graham Hunting, Shayla Neufeld, and 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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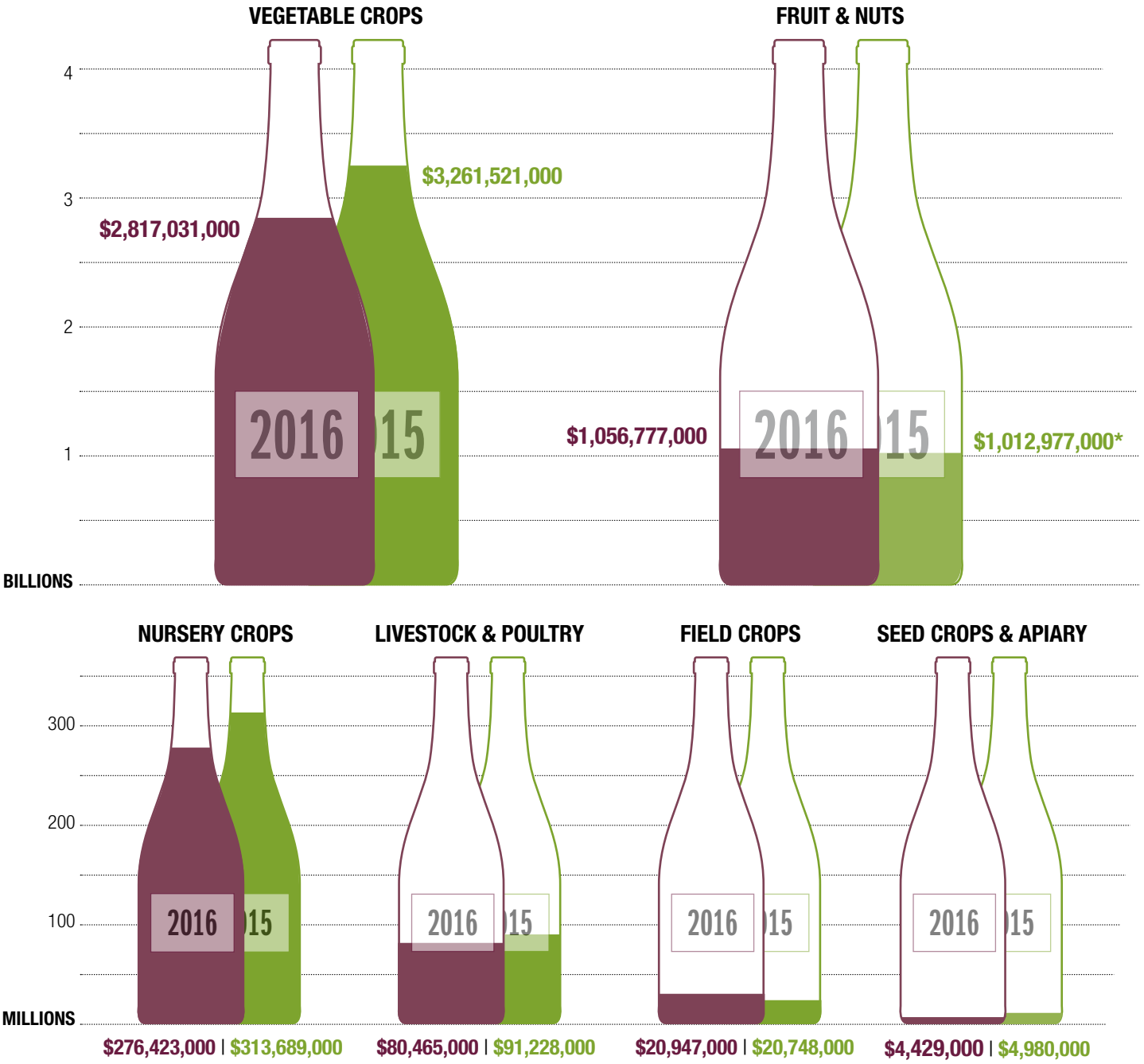
GROSS PRODUCTION VALUE



CATEGORIES	2016	2015
Vegetable Crops	$2,817,031,000	$3,261,521,000
Fruit & Nuts	$1,056,777,000	$1,012,977,000*
Nursery Crops	$276,423,000	$313,689,000
Livestock & Poultry	$80,465,000	$91,228,000
Field Crops	$20,947,000	$20,748,000
Seed Crops & Apiary	$4,429,000	$4,980,000
TOTAL	**$4,256,072,000**	**$4,705,143,000***

* Adjusted Figure

MONTEREY COUNTY'S TOP MULTI-MILLION DOLLAR CROPS

CROP	2016 CROP VALUE	2016 CROP RANKING	2015 CROP RANKING
Leaf Lettuce	**$783,102,000**	**1**	**1**
Strawberry	**$724,602,000**	**2**	**2**
Head Lettuce	**$478,172,000**	**3**	**3**
Broccoli	**$391,790,000**	**4**	**4**
Nursery	**$276,423,000**	**5**	**5**
Wine Grape	**$238,892,000**	**6**	**8**
Cauliflower	**$189,567,000**	**7**	**6**
Celery	**$161,788,000**	**8**	**7**
Misc. Vegetables	**$158,350,000**	**9**	**9**
Spinach	**$132,716,000**	**10**	**10**
Mushroom	$92,557,000	11	11
Beef Cattle	$67,817,000	12	12
Brussels Sprout	$46,306,000	13	20
Cabbage	$45,978,000	14	17
Spring Mix	$43,643,000	15	13
Salad Products	$41,650,000	16	14
Lemon	$41,181,000	17	15
Raspberry	$41,114,000	18	18
Carrot	$34,307,000	19	21
Kale	$32,991,000	20	19
Artichoke	$30,528,000	21	16
Peas	$30,519,000	22	23
Onions, Green	$25,298,000	23	22
Onions, Dry	$21,090,000	24	24
Rangeland	$18,597,000	25	25
Asparagus	$12,772,000	26	26

MONTEREY COUNTY'S MAJOR CROP TRENDS

CROP		1996	2006	2016
Artichoke	Acre	6,626	7,242	4,050
	Value	$39,983,000	$70,554,000	$30,528,000
	2016 CPI Adjusted*	$61,136,000	$83,993,000	—
Broccoli	Acre	60,059	49,119	57,566
	Value	$229,472,000	$234,400,000	$391,790,000
	2016 CPI Adjusted	$350,875,000	$279,048 ,000	—
Cauliflower	Acre	21,913	17,524	21,033
	Value	$118,850,000	$95,059,000	$189,567,000
	2016 CPI Adjusted	$181,728,000	$113,165,000	—
Celery	Acre	8,194	9,271	12,470
	Value	$72,477,000	$108,919,000	$161,788,000
	2016 CPI Adjusted	$110,821,000	$129,665,000	—
Grapes (Wine)	Acre	33,320	38,165	44,771
	Value	$129,663,000	$217,983,000	$238,892,000
	2016 CPI Adjusted	$198,261,000	$259,504,000	—
Head Lettuce	Acre	72,280	66,007	41,460
	Value	$356,640,000	$443,920,000	$478,172,000
	2016 CPI Adjusted	$545,321,000	$528,476,000	—
Leaf Lettuce	Acre	33,004	103,256	66,121
	Value	$158,048,000	$630,370,000	$783,102,000
	2016 CPI Adjusted	$241,664,000	$750,440,000	—
Mushroom	Pounds	48,624,000	47,634,000	43,659,000
	Value	$51,687,000	$72,404,000	$92,557,000
	2016 CPI Adjusted	$79,032,000	$86,195,000	—
Nursery	Acre	2,140	1,828	1,116
	Value	$114,176,000	$339,225,000	$276,423,000
	2016 CPI Adjusted	$174,580,000	$403,839,000	—
Spinach	Acre	8,005	11,369	14,704
	Value	$43,614,000	$111,280,000	$132,716,000
	2016 CPI Adjusted	$66,688,000	$132,476,000	—
Strawberry	Acre	7,222	9,295	10,029
	Value	$180,664,000	$439,796,000	$724,602,000
	2016 CPI Adjusted	$276,245,000	$523,567,000	—

TOTAL OF MAJOR CROPS ABOVE

Acre	**252,763**	**313,076**	**273,320**
Value	**$1,495,274,000**	**$2,763,910,000**	**$3,500,137,000**
CPI Adjusted	**$2,286,351,000**	**$3,290,368,000**	**—**

* Consumer Price Index Conversion http://liberalarts.oregonstate.edu/sites/liberalarts.oregonstate.edu/files/polisci/faculty-research/sahr/inflation-conversion/pdf/cv2016.pdf

VEGETABLE CROPS

CROP[1]	YEAR	ACREAGE	PRODUCTION PER ACRE	TOTAL	UNIT	VALUE PER UNIT	TOTAL[2]
Anise	2016	789	16.35	12,900	ton	$745.00	$9,611,000
	2015	769	17.00	13,100	ton	$810.00	$10,611,000
Artichoke	2016	4,050	4.74	19,200	ton	$1,590.00	$30,528,000
	2015	4,659	4.75	22,100	ton	$2,250.00	$49,725,000
Asparagus	2016	1,703	4.01	6,830	ton	$1,870.00	$12,772,000
	2015	1,631	4.00	6,520	ton	$2,060.00	$13,431,000
Bok Choy	2016	506	18.02	9,120	ton	$642.00	$5,855,000
	2015	422	21.00	8,860	ton	$508.00	$4,501,000
Broccoli, Bulk[3]	2016	—	—	101,000	ton	$790.00	$79,790,000
	2015	—	—	117,000	ton	$801.00	$93,717,000
Fresh	2016	43,918	7.40	325,000	ton	$960.00	$312,000,000
	2015	45,447	7.20	327,000	ton	$1,007.00	$329,289,000
Broccoli, Total	2016	57,566	—	—	—	—	$391,790,000
	2015	61,697	—	—	—	—	$423,006,000
Brussels Sprout	2016	3,216	10.50	33,800	ton	$1,370.00	$46,306,000
	2015	1,835	10.03	18,400	ton	$1,700.00	$31,280,000
Cabbage, Bulk	2016	—	—	64,900	ton	$220.00	$14,278,000
	2015	—	—	65,300	ton	$240.00	$15,672,000
Fresh	2016	2,900	21.86	63,400	ton	$500.00	$31,700,000
	2015	2,998	21.50	64,500	ton	$482.00	$31,089,000
Cabbage, Total	2016	5,869	—	—	—	—	$45,978,000
	2015	6,035	—	—	—	—	$46,761,000

1 Organic production included.
2 Totals may not calculate due to rounding.
3 Bulk may include one or more of the following: food service, processing and/or value added.

VEGETABLE CROPS (CONTINUED)

CROP	YEAR	ACREAGE	PRODUCTION PER ACRE	TOTAL	UNIT	VALUE PER UNIT	TOTAL
Carrot, Bulk	2016	—	—	48,100	ton	$352.00	$16,931,000
	2015	—	—	33,300	ton	$336.00	$11,189,000
Fresh	2016	1,502	20.42	30,700	ton	$566.00	$17,376,000
	2015	1,433	20.83	29,800	ton	$514.00	$15,317,000
Carrots, Total	2016	3,105	—	—	—	—	$34,307,000
	2015	3,033	—	—	—	—	$26,506,000
Cauliflower, Bulk	2016	—	—	31,400	ton	$722.00	$22,671,000
	2015	—	—	33,000	ton	$802.00	$26,466,000
Fresh	2016	17,775	9.62	171,000	ton	$976.00	$166,896,000
	2015	15,385	10.07	155,200	ton	$1,363.00	$211,538,000
Cauliflower, Total	2016	21,033	—	—	—	—	$189,567,000
	2015	18,655	—	—	—	—	$238,004,000
Celery, Bulk	2016	—	—	32,500	ton	$375.00	$12,188,000
	2015	—	—	31,600	ton	$540.00	$17,064,000
Fresh	2016	11,473	32.60	374,000	ton	$400.00	$149,600,000
	2015	11,129	32.62	363,000	ton	$575.00	$208,725,000
Celery, Total	2016	12,470	—	—	—	—	$161,788,000
	2015	12,098	—	—	—	—	$225,789,000
Chard	2016	606	9.14	5,540	ton	$1,070.00	$5,928,000
	2015	641	9.28	5,950	ton	$1,080.00	$6,426,000
Cilantro	2016	1,547	7.35	11,400	ton	$961.00	$10,955,000
	2015	1,350	6.85	9,250	ton	$1,340.00	$12,395,000
Herbs[4]	2016	92	7.91	728	ton	$1,750.00	$1,274,000
	2015	97	7.55	732	ton	$2,260.00	$1,654,000
Kale	2016	2,694	10.28	27,700	ton	$1,191.00	$32,991,000
	2015	2,534	12.57	31,850	ton	$1,020.00	$32,487,000
Leek	2016	339	12.51	4,240	ton	$1,500.00	$6,360,000
	2015	334	12.60	4,210	ton	$1,500.00	$6,315,000

4 Includes: Dill, Oregano, Rosemary, Sage and Thyme.

VEGETABLE CROPS (CONTINUED)

CROP	YEAR	ACREAGE	PRODUCTION PER ACRE	TOTAL	UNIT	VALUE PER UNIT	TOTAL
Lettuce, Total[5]	2016	107,581	—	—	—	—	$1,261,274,000
	2015	107,619	—	—	—	—	$1,506,551,000
Misc. Vegetables, Bulk	2016	—	—	159,000	ton	$572.00	$90,948,000
	2015	—	—	127,000	ton	$715.00	$90,805,000
Fresh	2016	11,813	5.99	70,800	ton	$952.00	$67,402,000
	2015	10,321	6.00	61,900	ton	$1,070.00	$66,246,000
Misc. Vegetables, Total[6]	2016	38,357	—	—	—	—	$158,350,000
	2015	33,752	—	—	—	—	$157,051,000
Mushroom	2016	144	—	43,659,000	lbs	$2.12	$92,557,000
	2015	148	—	44,393,000	lbs	$2.14	$95,001,000
Napa Cabbage	2016	474	17.30	8,200	ton	$827.00	$6,781,000
	2015	541	29.20	15,800	ton	$815.00	$12,877,000
Onion, Dry	2016	2,205	41.40	91,300	ton	$231.00	$21,090,000
	2015	2,296	42.00	96,400	ton	$226.00	$21,786,000
Onion, Green	2016	911	15.26	13,900	ton	$1,820.00	$25,298,000
	2015	922	15.26	14,100	ton	$1,800.00	$25,380,000
Parsley	2016	375	14.40	5,400	ton	$1,150.00	$6,210,000
	2015	651	18.34	11,900	ton	$1,132.00	$13,471,000
Peas[7]	2016	1,634	—	—	—	—	$30,519,000
	2015	1,528	—	—	—	—	$24,120,000
Peppers[8]	2016	771	21.43	16,500	ton	$468.00	$7,722,000
	2015	1,091	21.08	23,000	ton	$312.00	$7,176,000
Radish	2016	164	13.78	2,260	ton	$999.00	$2,258,000
	2015	141	15.25	2,150	ton	$1,180.00	$2,537,000

5 See Lettuce Production, page 9.
6 Includes: Arugula, Beet, Broccolini, Cactus Pear, Collard Green, Cucumber, Fava Bean, Frisee, Garlic, Kohlrabi, Mache, Mustard, Pumpkin, Radicchio, Rappini, Tomato and Turnip.
7 Includes: Bulk.
8 Includes: Bell Pepper, Chili Pepper and Pimento.

VEGETABLE CROPS (CONTINUED)

CROP	YEAR	ACREAGE	PRODUCTION PER ACRE	TOTAL	UNIT	VALUE PER UNIT	TOTAL
Salad Products	2016	—	—	98,000	ton	$425.00	$41,650,000
	2015	—	—	122,000	ton	$445.00	$54,290,000
Spinach, Bulk	2016	—	—	113,000	ton	$972.00	$109,836,000
	2015	—	—	113,000	ton	$1,100.00	$124,300,000
Fresh	2016	1,816	8.81	16,000	ton	$1,430.00	$22,880,000
	2015	1,460	9.07	13,200	ton	$1,330.00	$17,556,000
Spinach, Total	2016	14,704	—	—	—	—	$132,716,000
	2015	13,919	—	—	—	—	$141,856,000
Spring Mix	2016	7,900	6.70	52,900	ton	$825.00	$43,643,000
	2015	8,030	8.63	69,300	ton	$1,000.00	$69,300,000
Squash	2016	182	10.93	1,990	ton	$479.00	$953,000
	2015	209	11.09	2,320	ton	$532.00	$1,234,000

VEGETABLE CROPS TOTAL

2016	**290,987**	**$2,817,031,000**
2015	**286,637**	**$3,261,521,000**

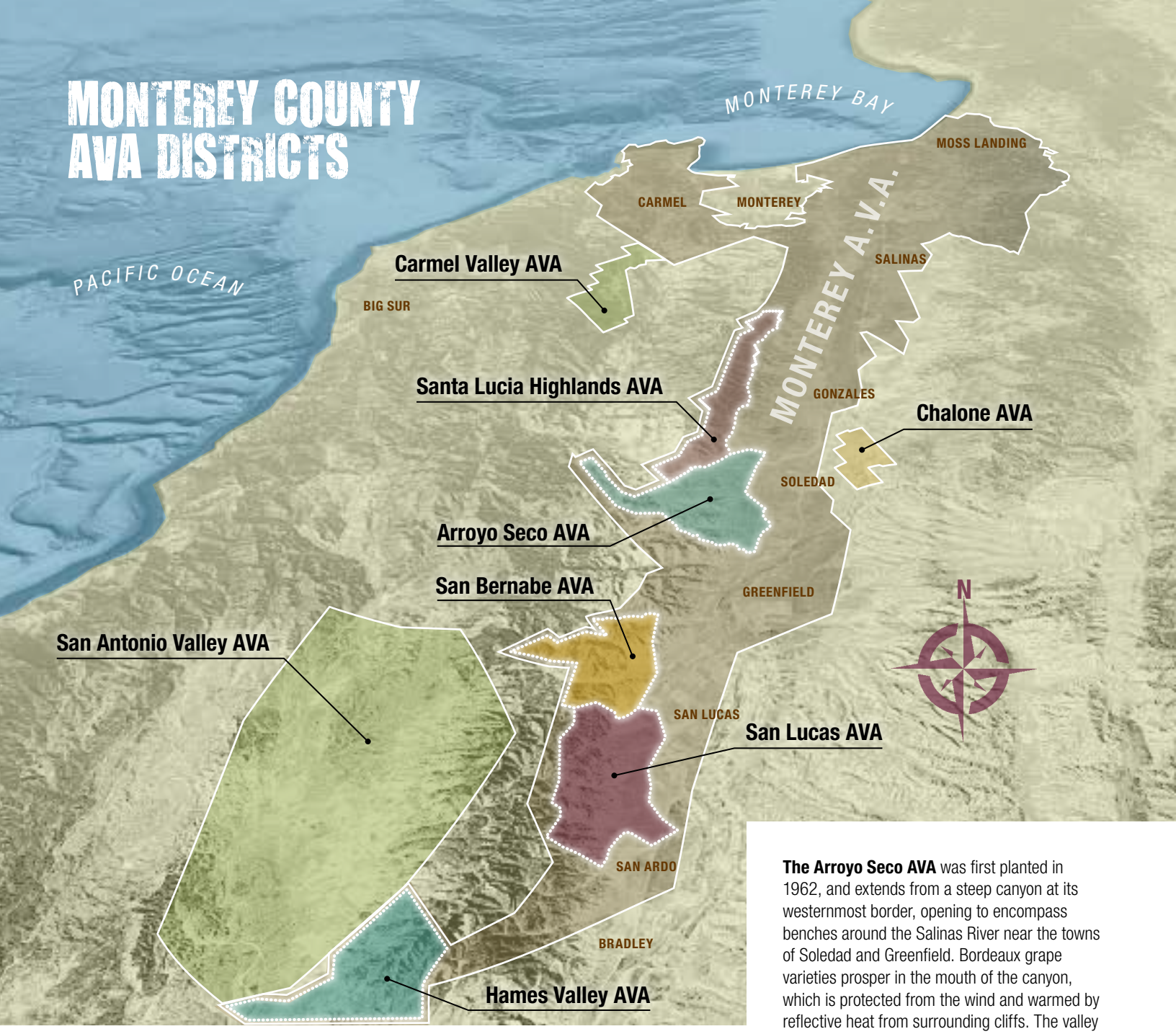
LETTUCE PRODUCTION

CROP	YEAR	ACREAGE	PRODUCTION PER ACRE	TOTAL	UNIT	VALUE PER UNIT	TOTAL
HEAD LETTUCE							
Naked Pack	2016	—	—	5,555,000	ctn[9]	$11.50	$63,883,000
	2015	—	—	5,326,000	ctn	$16.35	$87,080,000
Wrapped Pack	2016	—	—	22,771,000	ctn	$12.65	$288,053,000
	2015	—	—	23,355,000	ctn	$17.25	$402,874,000
Head Lettuce, Bulk	2016	—	—	302,000	ton	$418.00	$126,236,000
	2015	—	—	327,000	ton	$450.00	$147,150,000
Head Lettuce, Total	2016	41,460	1,000	41,456,000	ctn	$11.53	$478,172,000
	2015	42,802	1,000	42,898,000	ctn	$14.85	$637,104,000
LEAF LETTUCE							
Butter Leaf Lettuce	2016	959	950	911,000	ctn	$10.10	$9,201,000
	2015	750	1,302	977,000	ctn	$10.44	$10,200,000
Endive	2016	242	1,100	266,000	ctn	$10.60	$2,820,000
	2015	265	1,265	335,000	ctn	$11.70	$3,920,000
Escarole	2016	130	1,100	143,000	ctn	$13.30	$1,902,000
	2015	268	1,265	339,000	ctn	$12.78	$4,332,000
Green Leaf Lettuce	2016	7,705	1,050	8,090,000	ctn	$11.92	$96,433,000
	2015	7,725	1,050	8,111,000	ctn	$10.51	$85,247,000
Red Leaf Lettuce	2016	3,183	1,050	3,342,000	ctn	$11.10	$37,096,000
	2015	3,651	1,050	3,834,000	ctn	$10.38	$39,797,000
Romaine Lettuce[10]	2016	40,600	1,000	40,600,000	ctn	$12.50	$507,500,000
	2015	38,474	1,050	40,398,000	ctn	$13.30	$537,293,000
Leaf Lettuce, Bulk	2016	N/A	N/A	233,000	ton	$550.00	$128,150,000
	2015	N/A	N/A	282,000	ton	$669.00	$188,658,000
Leaf Lettuce, Total	2016	66,121	N/A	65,989,000	ctn	$13.07	$783,102,000
	2015	64,817	N/A	69,288,000	ctn	$12.55	$869,447,000

LETTUCE CROPS TOTAL

2016	**107,581**	**$1,261,274,000**
2015	**107,619**	**$1,506,551,000**

9 Carton
10 Includes Romaine Hearts



American Viticultural Areas, or "AVAs," are federally-recognized growing regions that reflect the geographic pedigree of wine grapes and wines. These designations attribute given qualities, reputation, or other characteristics to a wine made from grapes grown in that area.

Monterey County boasts nine AVAs that have been identified as one-of-a-kind winegrowing districts: Monterey, Arroyo Seco, Carmel Valley, Chalone, Hames Valley, San Antonio Valley, San Bernabe, San Lucas, and Santa Lucia Highlands. Over 98% of Monterey's vineyards are in the Salinas Valley, mostly on the benchlands and foothills. There are two important exceptions—Carmel Valley, which runs inland from the Pacific, and the San Antonio Valley, a highland valley that lies at the southern end of the county, nestled between two ranges of the Santa Lucia Mountains.

The Monterey AVA is the largest appellation in Monterey County, and encompasses a broad range of viticultural microclimates influenced by the vineyards' proximity to the Monterey Bay. It includes five other AVAs within its boundaries: Arroyo Seco, Hames Valley, San Bernabe, San Lucas, and Santa Lucia Highlands. Typically rainfall averages 12-13 inches annually. Other contributing factors include reliable afternoon breezes, which alleviate disease pressure on the vines, and coastal fog that occurs within a narrow temperature range preventing the environment from getting too hot.

The Arroyo Seco AVA was first planted in 1962, and extends from a steep canyon at its westernmost border, opening to encompass benches around the Salinas River near the towns of Soledad and Greenfield. Bordeaux grape varieties prosper in the mouth of the canyon, which is protected from the wind and warmed by reflective heat from surrounding cliffs. The valley floor is much cooler, providing ideal conditions for the Burgundian varietals. Integral to this area's soils are the "Greenfield Potatoes"—small cobblestones which store and release heat while providing excellent drainage.

The Carmel Valley AVA has the distinction of encompassing Father Junipero Serra's first established vineyards from the 18th century. Commercial grape growing began in this AVA in 1967, with 40 acres of Cabernet Sauvignon in the Cachagua region. In 1983, Carmel Valley's 19,200 mountainous acres were granted unique AVA status. The well-draining, gravelly terraces of the district, coupled with warm days and cool nights are especially suited to red varieties of France's Bordeaux region.

MONTEREY COUNTY BOASTS NINE AVAS THAT HAVE BEEN IDENTIFIED AS ONE-OF-A-KIND WINEGROWING DISTRICTS.

The Chalone AVA was planted in 1919, and is home to the oldest producing vines in Monterey County at an 1,800-foot elevation in the Gavilan Mountain Range, near the Pinnacles National Monument. This dramatic locale can see daily temperature swings from the high 90s to the low 50s.

The Hames Valley AVA, approved in 1994, is the newest in Monterey County. The grape growing section of the district is sheltered from the strong winds of the Salinas Valley. On average, Hames Valley is much warmer than most of the County's northern winegrowing regions. Yet Monterey Bay's moderating influx of cool air is still present.

The San Antonio Valley AVA is one of the warmest, with a significant daily degree differential. Warmer weather allows fruit to fully mature while colder night temperatures preserve balanced acids and sugar ratios. Bordeaux, Rhone Varietals and Zinfandel are well suited to this climate.

The San Bernabe AVA, located in the middle of the winegrowing region, experiences a range of climatic conditions suitable for several varietals. With an average of 30 degrees variation in temperature per day and strong afternoon winds, San Bernabe grapes generally stay on the vine several weeks longer than in comparable temperatures outside of the area.

The San Lucas AVA was a cattle-grazing range for over 150 years, and vineyards were first planted in 1970. This region typically has very warm days and cool nights, and daily summer temperatures can fluctuate by nearly 60 degrees. The appellation is made up of fans and terraces of diatomaceous shale and varying types of sandstone with elevations ranging from 500 to 1,200 feet.

The Santa Lucia Highlands was approved in 1991 as an AVA, and contains vineyards that are planted on the southeast-facing terraces of the Santa Lucia Mountains, overlooking the Salinas River Valley. Ancient, glacial soils pair with ocean fog and breezes to create a Region I climate, ideal for growing premium pinot noir and chardonnay.

FRUIT & NUT CROPS

CROP	YEAR	ACREAGE	PRODUCTION PER ACRE	TOTAL	UNIT	VALUE PER UNIT	TOTAL
Avocado	2016	245	5.38	1,320	ton	$2,430.00	$3,208,000
	2015	229	2.19	503	ton	$2,910.00	$1,464,000
Blackberry	2016	240	7.08	1,700	ton	$2,650.00	$4,505,000
	2015	204	7.00	1,430	ton	$3,130.00	$4,476,000
Grapes (Wine)[11]	2016	44,771	3.84	172,000	ton	$1,389.00	$238,892,000
	2015	44,296	3.16	140,000	ton	$1,328.00	$185,925,000
Lemon	2016	1,146	32.37	37,100	ton	$1,110.00	$41,181,000
	2015	1,294	35.26	45,600	ton	$1,180.00	$53,808,000
Misc. Fruit[12]	2016	477	2.74	1,310	ton	$2,500.00	$3,275,000
	2015	133	5.50	732	ton	$3,500.00	$2,562,000
Raspberry	2016	649	9.00	5,840	ton	$7,040.00	$41,114,000
	2015	711	9.00	6,400	ton	$6,200.00	$39,680,000
Strawberry	2016	10,029	43.37	435,000	ton	$1,625.00	$706,875,000
	2015	10,804	36.65	396,000	ton	$1,771.00	$701,316,000
Processing	2016	—	—	31,100	ton	$570.00	$17,727,000
	2015	—	—	40,800	ton	$582.00	$23,746,000
Strawberry Total	2016	10,029	—	466,000	ton	—	$724,602,000
	2015	10,804	—	437,000	ton	—	$725,062,000*

FRUIT & NUT CROPS TOTAL

2016	**57,557**	**$1,056,777,000**
2015	**57,671***	**$1,012,977,000***

11 Represents Bearing Acres only; see Wine Grape Production, pages 14-15.
12 Includes: Apple, Blueberry, Kiwi, Loganberry, Olallieberry, Olive and Walnut.
* Adjusted Figure

THE ECONOMIC EVOLUTION OF MONTEREY COUNTY WINE

The Monterey wine industry has flourished in the last fifty years, growing from low-margin commodity products to higher-margin differentiated, branded products. In the last 20 years, tasting rooms have significantly contributed to this economic expansion. These attractions bridge Monterey County's main economic drivers—agriculture and tourism.

COMMODITY

Wine-growing has a long history in Monterey County with Spanish Padres planting grapes at the San Antonio Mission in Monterey in 1770 and at the Soledad Mission in 1790. In 1960, renowned viticulturist Professor A.J. Winkler published his report on the newest and preferred grape growing regions in California, sharing "In Monterey County, the temperature and soils of parts of the county combine to provide favorable conditions for the growing of fine-quality grapes." Influenced by this report, cultivated grape-growing land went from less than a few hundred acres before 1960 to over 31,000 by the end of the 1970's.

The recent phase of wine growing began in the 1960's. By the end of the 1960's, there were almost 2,500 cultivated acres of grapes, with French Colombard being the most widely planted varietal.

1960: Chalone produced its first wine label.

1962: Mirrassou planted 1,000 acres of vineyards for Paul Masson.

1965: Karl Wente planted 300 acres in 1965 while also creating a nursery to supply other vintners with wine, vine cuttings and rootstock. Today, over 50% of Chardonnay planted in California comes from Wente Clones.

1967: Durney Vineyards planted 60 acres of Cabernet Sauvignon in Carmel Valley.

The 1970's were a high time for growers with the biggest wave of planting in Monterey's wine industry history, motivated in part by tax benefits. In just three years, between 1971 to 1974, 25,000 acres were planted.

1970: Dick Graff and Phil Woodward expanded the vineyards and winery at Chalone in the Gabilan Range.

1971: Doug Meador planted the 365 acre Ventana Vineyards in Arroyo Seco.

1972: Drawn to the region for its untapped potential, investment banker Al Scheid purchased land and planted 2,100 acres in 1972 as a potential investment vehicle.

1972: Jerry Lohr planted 280 acres of estate vineyards in Arroyo Seco.

1972–1975: Gerald McFarland and Phil Johnson planted 9,600 acres.

1972: Bill Jekel planted his Sanctuary Estate Vineyard in Arroyo Seco.

1972–1974: The most significant planting was the world's single largest contiguous vineyard, 8,100 acres, in San Bernabe.

1973: Rich Smith planted the Santa Lucia Highlands vineyard Paraiso for distinct groups of investors.

By 1980, Monterey had about 32,000 acres of vines—an 1156% increase in twenty years! The several thousands of acres planted in the 1960's were primarily made into the growers' branded wines, but that changed in the 1970's when most of the grapes were commodities, sold under contract to California's large commercial wineries outside of the area. At one point, up to 85% of the grapes grown in the region were sold to out-of-county wineries, and the wines often had no mention of Monterey on the label.

SPECIALITY CROP

By the mid-1990's, the wine industry in Monterey County changed significantly. New varietals, clones, and rootstock that were better suited to the unique growing conditions of the Monterey wine-growing region slowly replaced the vines planted in the 1970's. Winemakers desired the high-quality fruit and the value increased with demand. Grapes from the Santa Lucia Highlands (SLH) AVA were particularly sought out, differentiating the product and increasing the value of the AVA's grapes. Today it is not only SLH grapes that are sought out as a specialty crop, but much of the region's grapes are perceived as particularly high-quality fruit.

MONTEREY COUNTY WINES & AVA'S

With better plant material and improved viticulture, Monterey fruit continued to be highly valued by winemakers. Not only was the industry changing in the vineyards in the 1990's, but it was also changing in the wineries. Winemaking processes were improving, and winemakers were increasingly producing higher-quality premium wines. Early into the first decade of the new century, boutique winemakers started wineries in Monterey, attracted by the quality of the fruit and growth potential for the region's wines. In addition, a trend was developing with younger family members taking leadership roles in family brands and continuing to increase their popularity and distinction.

AG TOURISM

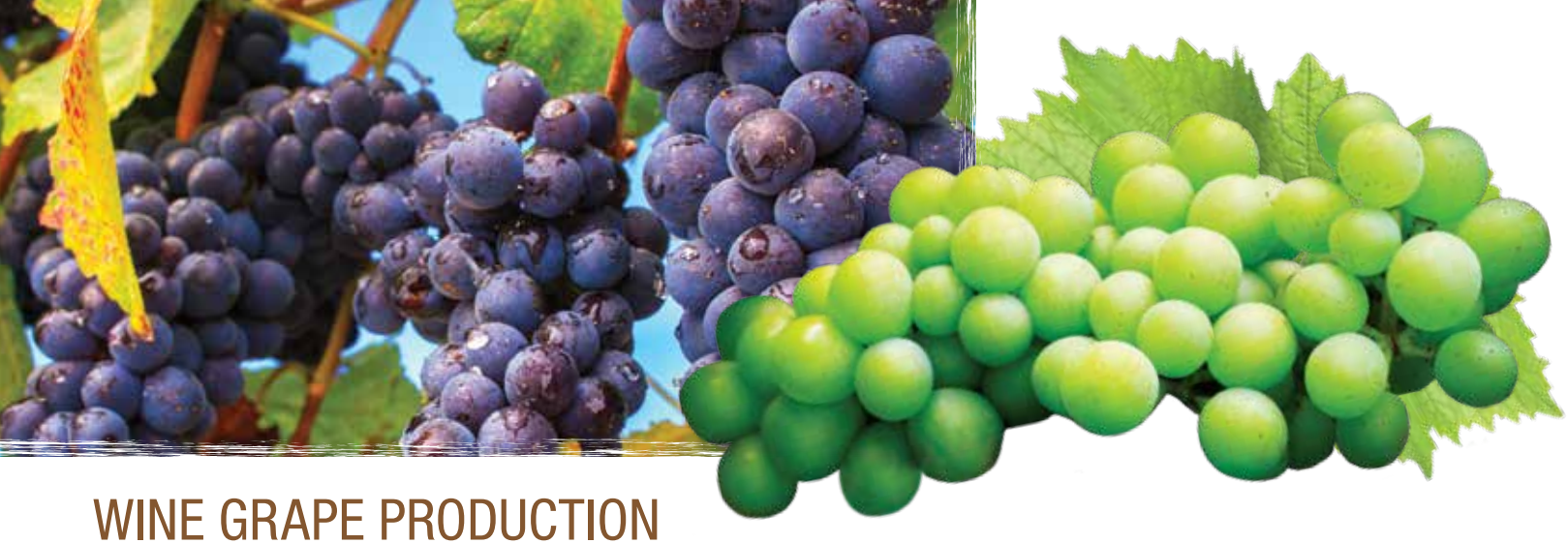
In 1995, there were just five tasting rooms in the county. Today, there are 65 tasting rooms in Monterey County with several more scheduled to open in the summer of 2017. They are located all over the County, from the vineyard tasting rooms along the River Road Wine Trail to the country setting of Carmel Valley, and beyond to the coastal tasting rooms in Monterey and Carmel-by-the-Sea. In 2013, Wine Enthusiast named Monterey County one of Best Wine Travel Destinations of the Year. The region welcomes over 400,000 visitors per year, bringing a total of $35 million in annual tourism dollars and contributing to over $100 million in statewide charitable donations.

SUSTAINABILITY

Sustainable winegrowing is standard business for Monterey County's vintners. Most are engaged in at least one of the independent third party sustainability certification programs, requiring them to actively manage and report on various indicators, both social and environmental.

Their proactive approach to supporting the health of their vineyards and workers is something they take very seriously. These programs typically include performance measures such as social responsibility, renewable energy use, water conservation measures, reducing waste streams, minimizing vineyard inputs, reducing packaging, recycling, and many other metrics. Increasing biodiversity, safe pest management, and enhancing soil health using cover crops and other methods are also goals. Vintners even utilize falconers to help deter grape-loving birds from eating the crop before harvest. Practices in Monterey County vineyards not only benefit wildlife but also soil dynamics and plant health. Vintners are leaders in the sustainability realm and are committed to producing grapes that make high-quality wines and provide a healthy and beautiful environment for employees, neighbors, and visitors.

Watch our video on the economic evolution of Monterey County wine at ag.co.monterey.ca.us



WINE GRAPE PRODUCTION

WHITE GRAPE VARIETIES	HARVESTED ACRES	AVERAGE PRICE PER TON	TOTAL TONS	TOTAL VALUE
Chardonnay	16,767	$1,320	55,800	$73,656,000
Pinot Gris	1,292	$1,210	6,100	$7,381,000
Riesling	1,714	$1,040	6,630	$6,895,000
Gewurztraminer	822	$832	7,340	$6,107,000
Sauvignon Blanc	975	$1,110	4,400	$4,884,000
Muscat Blanc	159	$1,150	910	$1,047,000
Malvasia Bianca	116	$1,140	773	$881,000
Pinot Blanc	104	$1,210	539	$652,000
Albarino	28	$1,360	356	$484,000
Gruner Veltliner	101	$1,150	321	$369,000
Viognier	141	$1,660	111	$184,000
Chenin Blanc	131	$1,160	101	$117,000
Other Whites[13]	139	$1,740	220	$383,000
SUBTOTAL WHITE GRAPE	**22,489**	**—**	**83,600**	**$103,040,000**

RED GRAPE VARIETIES	HARVESTED ACRES	AVERAGE PRICE PER TON	TOTAL TONS	TOTAL VALUE
Pinot Noir	8,762	$1,900	40,600	$77,140,000
Cabernet Sauvignon	4,989	$1,320	18,100	$23,892,000
Merlot	5,151	$1,080	17,100	$18,468,000
Syrah	1,485	$1,220	4,870	$5,941,000
Malbec	372	$1,290	1,940	$2,503,000
Grenache	272	$1,440	1,670	$2,405,000
Petite Sirah	300	$1,270	1,820	$2,311,000
Petit Verdot	165	$1,320	507	$669,000
Zinfandel	186	$1,600	278	$445,000
Cabernet Franc	131	$1,290	334	$431,000
Valdiguie	39	$1,150	310	$357,000
Sangiovese	84	$1,080	297	$321,000
Other Reds[14]	346	$1,500	646	$969,000
SUBTOTAL RED GRAPE	**22,282**	**—**	**88,500**	**$135,852,000**

13 Grenache Blanc, Marsanne, Muscat Orange, Picpoul Blanc, Roussanne, Sauvignon Musque, Semillon, Tocai Friulano and Vermentino.
14 Barbera, Carignane, Cinsaut, Counoise, Mataro, Souzao, Tempranillo and Touriga Nacional.

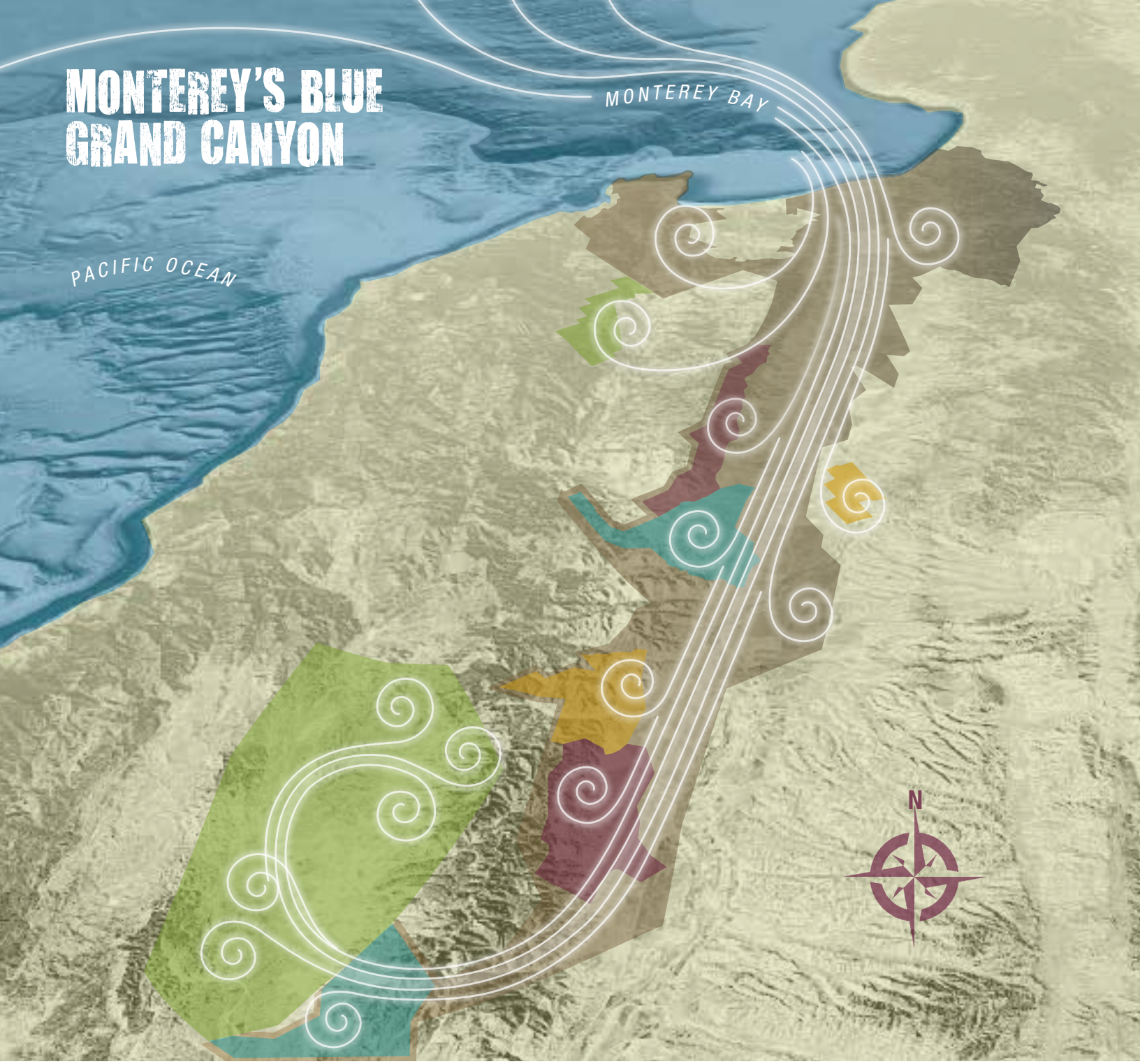
WINE GRAPE PRODUCTION (CONTINUED)

YEAR	NONBEARING ACRES	BEARING ACRES	TOTAL TONS	VALUE
2016	1,496	44,771	172,000	$238,892,000
2015	2,549	44,296	140,300	$185,925,000
2014	2,512	45,993	200,000	$247,357,000
2013	1,531	42,986	185,000	$226,982,000
2012	1,936	45,130	172,000	$214,306,000
2011	2,006	43,034	124,000	$140,976,000
2010	2,572	43,321	177,000	$172,916,000
2009	3,975	40,792	204,000	$238,082,000
2008	4,006	40,144	201,000	$238,366,000
2007	3,068	39,636	224,000	$251,604,000

Wine Spectator

magazine named the Pinot Noir from the Monterey County winegrowing region, and specifically the Santa Lucia Highlands AVA, as the **best vintage of Pinot Noir in California** from 2012 – 2015.

The **total economic impact** from the 2016 wine grape crop is over **$750 million.** Approximately 45-50% of Monterey County wine grapes are procured by out-of-county brands. The **economic value** of the grapes sold to other wineries in 2016 was over **$376 million.** This value excludes the over 50% of grapes grown directly by grower-winery operations, where wine is produced from the grapes grown, extending the value chain of the grapes.



BENEATH MONTEREY BAY IS A GIANT SUBMARINE CANYON 60 MILES LONG AND TWO MILES WIDE.

What causes Monterey County to be any different than other winegrowing regions? Surprisingly, it's an oceanographic phenomenon. Beneath Monterey Bay is a giant submarine canyon 60 miles long and two miles wide. Often compared in size and depth to the Grand Canyon, this underwater canyon is sometimes called the "Blue Grand Canyon™" of Monterey County. Flanked by the Gabilan mountain range to the east and the Santa Lucia Mountains to the west, the Salinas Valley maintains its cool coastal conditions due to the influence of this deepwater canyon in Monterey Bay. The extremely cold waters of the canyon keep coastal temperatures low and produce the evening fog that rolls in late every afternoon. They are also the engine behind the natural air conditioning that cools off the hot vineyards of the Salinas River Valley.

Situated less than 100 meters off Moss Landing, in the center of the Monterey Bay, the Blue Grand Canyon provides a climatic pathway that connects the deep sea to the wine growing

region of Monterey. Formed two million years ago, the Blue Grand Canyon's influence is felt from the Coastline to inland San Antonio Valley. The Canyon's vast weather effect on the viticultural districts of Monterey is manifested through fog, wind, lack of rain through the growing season, and moderate temperature with a large diurnal variation.

The Blue Grand Canyon is a steep, twisting phenomenon that almost perfectly bisects the seafloor of the Bay and causes a condition called upwelling. Upwelling brings the frigid water of the deep sea to the surface, cooling the marine air that hovers over the Monterey coast. Each day, the rising hot air from the Salinas Valley pulls the chilled marine air down its corridor. This cooling down effect allows grapes to ripen more slowly and evenly, resulting in a growing season which can be up to two months longer than other wine growing regions. Winegrowers call this lengthening of the growing season "hang time." Increased hang time leads to exceptional wines that exhibit intense fruit flavors, deep color extraction, and full varietal expression. Vineyards are planted specifically within The Thermal Rainbow, with cool climate loving Pinot Noir and Chardonnay found mainly in the north and sun loving Cabernet Sauvignon, Zinfandel and Rhone varieties flourishing in the south. The manifestations of the Thermal Rainbow dictate the proper varietal planting choice for each sub-AVA and vineyard within the county.

Watch our video on the Economic Evolution of Monterey County Wine at ag.co.monterey.ca.us

FIELD CROPS

CROP	YEAR	ACREAGE	PRODUCTION PER ACRE	TOTAL	UNIT	VALUE PER UNIT	TOTAL
Barley, Grain	2016	4,017	0.69	2,770	ton	$142.00	$393,000
	2015	4,163	0.50	2,080	ton	$142.00	$295,000
Bean[15]	2016	385	1.67	643	ton	$2,080.00	$1,337,000
	2015	340	1.45	493	ton	$1,880.00	$927,000
Hay, Alfalfa	2016	200	6.05	1,210	ton	$200.00	$242,000
	2015	233	5.50	1,280	ton	$260.00	$333,000
Misc. Field Crops[16]	2016	845	1.83	1,550	ton	$100.00	$155,000
	2015	994	1.91	1,900	ton	$103.00	$196,000
Oat[17]	2016	416	1.75	728	ton	$120.00	$87,400
	2015	451	2.00	902	ton	$205.00	$185,000
Rangeland	2016	1,062,699	—	—	acre	$17.50	$18,597,000
	2015	1,063,390	—	—	acre	$17.50	$18,609,000
Wheat, Grain	2016	966	0.88	850	ton	$160.00	$136,000
	2015	1,100	0.88	968	ton	$210.00	$203,000

FIELD CROPS TOTAL

2016	**1,069,528**	**$20,947,000**
2015	**1,070,671**	**$20,748,000**

15 Includes: Peruano, Pintos, Pink, Pinquito and Lima Beans
16 Includes: Safflower, Pasture and Barley.
17 Includes: Hay Oats and Misc. Oats.

LIVESTOCK & POULTRY

CROP	YEAR	HEAD	PRODUCTION	UNIT	VALUE PER UNIT	TOTAL
Cattle & Calves	2016	24,900	208,000	cwt+	$119.00	$24,752,000
	2015	19,300	184,000	cwt	$146.00	$26,864,000
Stocker	2016	47,200	297,000	cwt	$145.00	$43,065,000
	2015	36,400	271,000	cwt	$199.00	$53,929,000
Sheep & Lambs	2016	1,100	1,490	cwt	$107.00	$159,000
	2015	1,400	1,940	cwt	$107.00	$208,000
Hogs	2016	1,300	351,000	lbs	$0.65	$228,000
	2015	900	243,000	lbs	$0.69	$168,000
Misc. Livestock[18] & Poultry[19] Products	2016	—	—	—	—	$12,261,000
	2015	—	—	—	—	$10,059,000

LIVESTOCK & POULTRY TOTAL

2016	**$80,465,000**
2015	**$91,228,000**

18 Includes: Bulls, Cull Cows, Dairy Cows, Milk Manufacturing, and Market Milk.
19 Includes: Eggs, Hatcheries and Poultry.
+Hundredweight (100 pounds)

SEED PRODUCTION

CROP	YEAR	ACREAGE	PRODUCTION PER ACRE	TOTAL	UNIT	VALUE PER UNIT	TOTAL
Bean Seed, All	2016	692	1.25	865	ton	$3,110.00	$2,690,000
	2015	1,041	0.83	864	ton	$3,280.00	$2,834,000
Misc. Seed[20]	2016	887	0.72	639	ton	$2,300.00	$1,470,000
	2015	925	0.69	638	ton	$3,010.00	$1,920,000

SEED PRODUCTION TOTAL

2016	**1,579**	**$4,160,000**
2015	**1,966**	**$4,754,000**

APIARY PRODUCTION

CROP	YEAR	COLONIES	PRODUCTION	UNIT	VALUE PER UNIT	TOTAL
Honey	2016	—	6,500	lbs	$2.10	$13,700
	2015	—	6,000	lbs	$2.10	$12,600
Pollination[21]	2016	4,225	—	colony	$60.00	$254,000
	2015	3,525	—	colony	$60.00	$212,000
Wax	2016	—	320	lbs	$4.50	$1,440
	2015	—	300	lbs	$4.50	$1,350

APIARY PRODUCTION TOTAL

2016	**$269,000**
2015	**$226,000**

20 Includes: Barley, Broccoli, Cauliflower, Peas and Squash.
21 Seed Crops: Broccoli, Cauliflower, Cucumber, Squash, Sunflower and Raspberry Fruit.

CUT FLOWERS & CUT FOLIAGE

CROP	YEAR	ACREAGE	PRODUCTION QUANTITY SOLD	UNIT	VALUE PER UNIT	TOTAL
Alstroemeria	2016	1.8	54,100	per bunch	$2.27	$123,000
	2015	2.2	55,900	per bunch	$2.27	$127,000
Asiatic Lily	2016	0.5	19,500	per bunch	$4.59	$89,500
	2015	0.9	34,400	per bunch	$4.42	$152,000
Carnation	2016	1.9	695,000	per bloom	$0.12	$83,400
	2015	2.1	715,000	per bloom	$0.13	$93,000
Chrysanthemum	2016	17.8	1,542,000	per bloom	$1.28	$1,974,000
	2015	21.7	1,852,000	per bloom	$0.93	$1,722,000
Eucalyptus	2016	72.5	220,000	per bunch	$2.36	$519,000
	2015	71.0	187,000	per bunch	$1.58	$295,000
Gerbera	2016	8.7	3,434,000	per bloom	$0.49	$1,683,000
	2015	9.2	4,234,000	per bloom	$0.46	$1,948,000
Iris	2016	5.7	197,000	per bunch	$2.91	$573,000
	2015	7.7	200,000	per bunch	$3.06	$612,000
Misc. Cut Flowers & Cut Foliage[22]	2016	183.8	7,873,000	various	$2.28	$17,950,000
	2015	208.8	12,020,000	various	$2.13	$25,582,000
Oriental Lily	2016	2.6	76,800	per bunch	$9.83	$755,000
	2015	4.7	145,000	per bunch	$9.30	$1,349,000
Roses	2016	9.4	2,804,000	per bloom	$1.22	$3,421,000
	2015	8.9	2,734,000	per bloom	$1.23	$3,363,000
Tulips	2016	1.5	18,000	per bunch	$4.34	$78,100
	2015	1.8	22,500	per bunch	$4.43	$100,000

CUT FLOWERS & CUT FOLIAGE TOTAL

2016	**306**	**$27,249,000**
2015	**338**	**$35,334,000**

22 Includes: Amarnthus, Amaryllis, Anemone, Asters, Bells of Ireland, Boronia, Bulperum, Calendula, Calla Lily, Campanula, Celosia, Cornflower, Craspedia, Crocosmia, Curly Willow, Dahlias, Delphinium, Euphorbia, Ferns, Freesia, Gladiola, Godetia, Gomphena, Gypsophila, Heather, Hydrangea, Kale, Kangaroo Paw, Larkspur, Lavender, Leather Leaf, Liatris, Lily, Lisianthus, Marigold, Millet, Miniature Carnations, Narcissus, Protea, Queen Anne's Lace, Ranunculus, Rosemary, Rudbeckia, Safflower, Scabiosa, Statice, Strawflower, Sunflower, Sweet Pea, Trachelium and Tweedia.

NURSERY PRODUCTS

CROP	YEAR	ACREAGE	PRODUCTION QUANTITY SOLD	UNIT	VALUE PER UNIT	TOTAL
Bedding Plants	2016	121.6	17,568,000	per plant	$3.16	$55,515,000
	2015	126.3	19,100,000	per plant	$1.76	$33,616,000
Misc. Nursery Products[23]	2016	233.1	10,366,000	various	$0.91	$9,433,000
	2015	241.8	6,741,000	various	$2.36	$15,909,000
Orchids	2016	73.0	11,482,000	per plant	$7.94	$91,167,000
	2015	72.9	11,615,000	per plant	$7.92	$91,991,000
Poinsettia	2016	79.8	2,189,000	per plant	$4.28	$9,369,000
	2015	53.1	1,175,000	per plant	$4.31	$5,064,000
Potted Plants	2016	203.9	11,967,000	per plant	$3.39	$40,568,000
	2015	210.8	13,917,000	per plant	$3.02	$42,029,000
Propagative Materials	2016	5.3	945,000	per plant	$0.72	$680,000
	2015	6.2	958,000	per plant	$0.42	$402,000
Vegetable Transplants	2016	72.3	956,785,000	per plant	$0.04	$38,271,000
	2015	82.2	1,217,649,000	per plant	$0.07	$85,235,000
Woody Ornamentals	2016	20.6	787,000	per plant	$5.30	$4,171,000
	2015	36.0	735,000	per plant	$5.59	$4,109,000

NURSERY PRODUCTS TOTAL

2016	**810**	**$249,174,000**
2015	**829**	**$278,355,000**

OVERALL NURSERY TOTAL[24]

2016	**1,116**	**$276,423,000**
2015	**1,167**	**$313,689,000**

23 Includes: Begonia, Bulbs, Christmas Trees, Corms, Fruit & Nut Trees, Jasmine, Myrtle, Native Plants, Rhizomes, Tubers, and Turf.
24 Totals from Cut Flower & Cut Foliage and Nursery Products.

PRODUCE EXPORTS BY COMMODITY

COMMODITY	2016 TOTAL POUNDS	COMMODITY	2015 TOTAL POUNDS
Lettuce	523,995,000	Lettuce	373,448,000
Strawberry	67,588,000	Strawberry	86,645,000
Celery	53,052,000	Broccoli	83,245,000
Broccoli	46,612,000	Celery	42,754,000
Cauliflower	40,679,000	Cauliflower	29,323,000
Fennel	19,132,000	Value Added	16,917,000
Nursery Stock	7,712,000	Fennel	9,870,000
Value Added	4,281,000	Carrot	3,772,000
Artichoke	4,054,000	Raspberry	3,515,000
Raspberry	3,825,000	Green Onion	3,335,000
Carrot	3,566,000	Seed	2,298,000
Seed	3,444,000	Nursery Stock	2,289,000
Other	19,460,000	Other	26,746,000
TOTAL	**797,400,000**		**684,157,000**

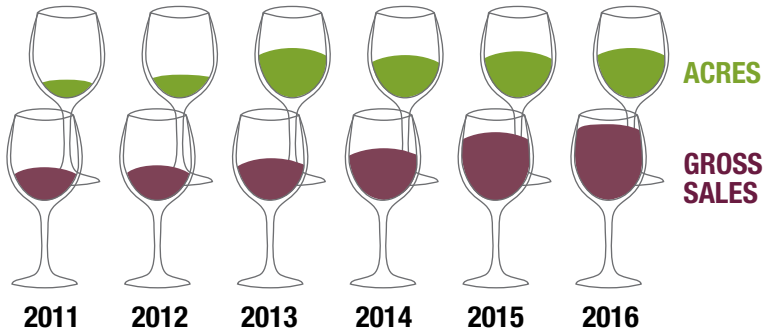
AGRICULTURAL EXPORTS TRADE PARTNERS

COUNTRY	2016 TOTAL POUNDS	COUNTRY	2016 TOTAL POUNDS
Canada	271,294,000	Philippines	1,049,000
Taiwan	96,580,000	Kuwait	799,000
Japan	54,657,000	New Zealand	637,000
Mexico	43,101,000	Qatar	426,000
European Union	37,343,000	Australia	197,000
Hong Kong	11,797,000	Thailand	180,000
Saudi Arabia	4,745,000	Indonesia	169,000
Korea, Republic of	4,195,000	Chile	137,000
Singapore	3,439,000	French Polynesia	121,000
United Arab Emirates	2,759,000	India	98,200
Puerto Rico	2,735,000	Brazil	97,100
China	1,558,000	Honduras	73,700
Panama	1,531,000		

ORGANIC PRODUCTION REGISTERED IN MONTEREY COUNTY

YEAR	PRODUCERS	ACRES	GROSS SALES
2016	179	32,947	$365,199,000
2015	178	30,413*	$335,090,000
2014	158	28,270*	$277,294,000
2013	131	33,381	$214,437,000
2012	131	22,288	$182,657,000
2011	113	19,863	$170,352,000

* Adjusted Figure



ORGANIC – CERTIFICATION OR REGISTRATION

What's the difference? Is only one required? Or are both necessary? The word "organic" is a legal term that can only be used by a certified or registered operation for product marketing. Produce, livestock, processed products, and wild crops all face the same basic organic regulatory requirements. Every operation in California marketing product as "organic" needs to register with the California State Organic Program (SOP) or the California Department of Public Health. Certification with the United States Department of Agriculture (USDA) National Organic Program (NOP) is required when an operation's annual gross sales are $5,000 or more. In short, if an operation sells $5,000 or more, both registration and certification are required. County Agricultural Commissioners, the NOP and the SOP work together to ensure uniform enforcement of organic standards.

To be a certified organic operation, a producer, processor or livestock operator must apply for certification with an NOP Accredited Certifying Agency (ACA). ACA's are third-party organizations responsible for enforcing organic standards. Organic standards are maintained by the NOP, and all ACAs must be consistent in their enforcement of the standards. Certifiers are responsible for assuring their clients uphold the organic standards, but they can only enforce organic standards with their clients. Organic companies are subject to a rigorous annual certification process, which includes site inspections, comprehensive system plan review, a thorough paperwork audit, and product sampling for residue testing. Maintaining detailed paperwork is very important to show a company's compliance with organic regulations. An operation must show comprehensive knowledge of organic practices and standards, which are fundamental for sustaining an organic operation. Organic growers work equally hard in the fields as they do on paperwork.

ORGANIC GROWERS WORK EQUALLY HARD IN THEIR FIELDS AND ON THEIR PAPERWORK.

Organic processors must register with the California Department of Public Health. Registration requirements extend to almost all products, and the state agencies maintain a complete list of all organic operations. The SOP and County Agricultural Commissioners are contracted annually for the enforcement of organic regulations by assisting in statewide investigations and inspections. Frequent investigations and enforcement actions are the result of random sampling, public complaints and unannounced inspections. All enforcement agencies have the same goal, to assure organic product integrity, from the field until it's sold to the consumer at the supermarket or Certified Farmers' Market.

Whether an operation is certified or registered, or both, the organic label is much more than a marketing term. It reflects a community of hardworking people collaborating to ensure the integrity of organic products and transparency of operations throughout production. With the development of new ideas, efficiencies, and technologies, organic production is constantly evolving to promote a healthy environment and the continued availability of organic products.

EUROPEAN GRAPEVINE MOTH ERADICATION SUCCESS

In 2016 the European Grapevine Moth (EGVM) was successfully eradicated from California, which was a huge accomplishment for the state's Pest Prevention Program. EGVM was first detected in Napa County in 2009. By the time it was discovered, a significant population had already become established. Subsequent detections were made, leading to quarantines in the counties of Fresno, Mendocino, Merced, Nevada, Santa Clara, Santa Cruz, San Joaquin, Solano and Sonoma over the next several years. However, the state's infestation was localized in the heart of the North Coast wine grape production areas of Napa and Sonoma counties. Monterey County found only a single EGVM in a trap near Soledad in 2010, and because action was necessitated only after two or more moths were detected, the county was never placed under quarantine.

Unlike other leaf-rolling moths of the Tortricid family that feed on the leaves, EGVM attacks the flowers and clusters of berries, contaminating the fruit with webbing and frass—causing decay. Native to Southern Italy and present throughout Europe, North and West Africa, the Middle East and eastern Russia, how EGVM came to the United States remains a mystery. It may have hitchhiked on farm equipment imported from Europe. Because it is not native to the U.S., EGVM was not a target of California's regular pest detection program. By the time vineyard pest managers became aware of their presence, the pest populations had reached high levels in the North Coast area with the movement of grapes and equipment spreading the pest to other areas. The quarantines required for elimination disrupted the movement of wine grapes to wineries outside of their original growing regions resulting in a serious threat to the state's $6.8 billion grape crop, as well as some other fruits.

This significant economic threat made eradication of EGVM a top priority for the United States Department of Agriculture, the California Department of Agriculture, the county agricultural commissioners and the wine grape growers. A coordinated program of trapping, treatment and mating disruption was quickly deployed and received strong collective support from the community and the grape growers. When a single moth was found in Monterey County, growers responded by treating the vineyards, which was a normal pest management practice for other less serious leaf-rolling moth larvae present in our vineyards. This rapid response likely prevented the establishment of a population and avoided a quarantine of Monterey County wine grapes. On a broader scale, a Technical Working Group was formed, consisting of scientific and technical experts from the U.S. government, universities in California, Italy, and Chile, and California's grape industry. With a program based on the best available science and a sustained and cooperative effort by all parties, the last EGVM was found in a trap on June 25, 2014. Just over two years later, with continuing negative detections for a number of life cycles, the pest was officially declared to be eradicated in the U.S. The Monterey Agricultural Commissioner continues a trapping program for EGVM, with approximately 2,000 EGVM traps deployed in vineyards, nurseries and urban areas.

A COORDINATED PROGRAM OF TRAPPING, TREATMENT AND MATING DISRUPTION WAS QUICKLY DEPLOYED AND RECEIVED STRONG COLLECTIVE SUPPORT FROM THE COMMUNITY AND THE GRAPE GROWERS.

SUMMARY OF PEST MANAGEMENT ACTIVITIES

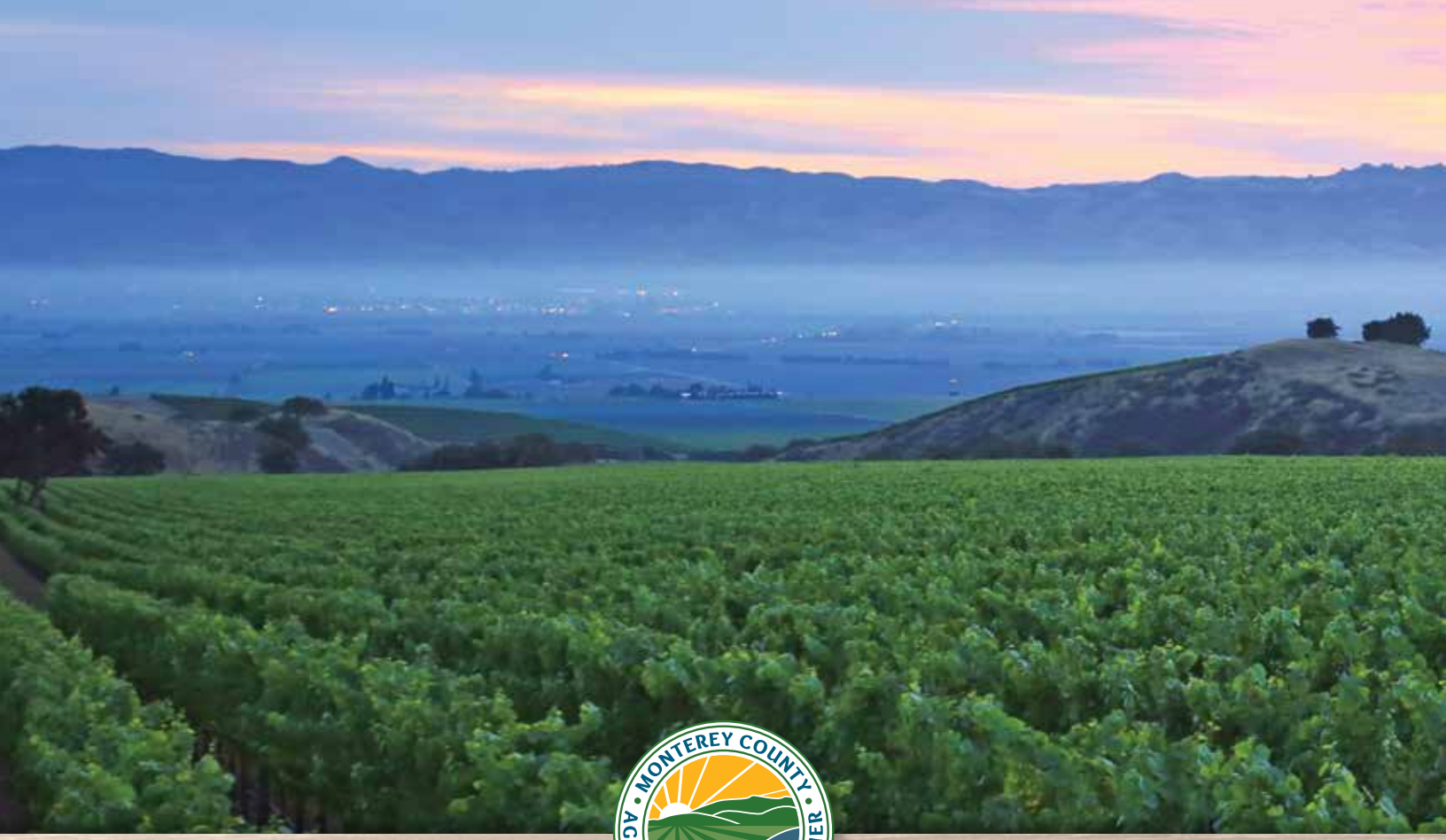
Pest Detection is the systematic search for pests arriving from an outside known infested area, or for pests not known to occur in California. The general goal is to detect pests before they become established so that eradication is no longer biologically or economically feasible. Detection trapping is performed primarily by the County Agricultural Commissioner's offices.

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. Phytosanitary field inspections for seed diseases accounted for 2,652 hours, with a total of 630 inspections being completed on 1,984 acres. Special surveys were made for exotic invasive weeds, Cymbalaria aphid, karnal bunt, citrus greening disease, sudden oak death disease, Asian citrus psyllid, brown marmorated stink bug, and glassy-winged sharpshooter. For the glassy-winged sharpshooter program, 1,291 incoming nursery stock shipments were inspected originating from regulated areas and no viable life stages were detected. A total of 594 pest exclusion inspections at parcel terminals for incoming plant shipments occured in 2016, with one rejection issued. Another 475 inspections of incoming plant material were performed for in state and out of state shipments.

ACTIVITY	CONTROL MECHANISM	SCOPE OF PROGRAM
COUNTY BIOLOGICAL CONTROL		
Yellow Starthistle, *Centaurea solstitialis*	Seedhead Weevils/Fly, *Bangasternus orientalis, Eustenopus villosus, Urophora sirunaseva, Larinus curtus*	47 sites
Italian Thistle, *Carduus spp.*	Seedhead weevil, *Rhinocyllus conicus*	General Distribution
Russian Thistle, *Salsola australis*	Leaf & stem mining moths, *Coleophora spp.*	General Distribution
Puncture Vine, *Tribulus terrestris*	Stem & Seed weevils, and *Microlarinus spp.*	General and Local Distribution
Ash Whitefly, *Siphoninus phillyreae*	Parasitic wasp, *Encarsia inaron*	General Distribution
PEST ERADICATION		
Scotch Thistle, *Onopordum acanthium*	Mechanical/Chemical	One Infestation
Skeletonweed, *Chrondrilla junceae*	Mechanical/Chemical	One Infestation
Puna Grass, *Achnatherum brachychaetum*	Mechanical/Chemical	Nine Infestations
Hydrilla, *Hydrilla verticillata*	Mechanical/Chemical	Eradicated
Biddy-biddy, *Acaena novae-zelandiae*	Mechanical/Chemical	Eradicated
PEST MANAGEMENT		
Roadside (virus host) Weeds	Chemical	County right-of-ways, spot treatment
Roadside, Targeted Noxious Weeds	Chemical	County right-of-ways, spot treatment
Lettuce Mosaic Virus	Virus-Free Seed	Indexing of all county-planted seed
Lettuce Mosaic Virus	Host-Free Period	No lettuce above ground during Dec. 7 - 21
Celery Mosaic Virus	Host-Free Period	No celery above ground in January
Lettuce Root Aphid	Quarantine, State Misc. Ruling 3597	Lombardy poplar prohibition

PEST TRAPPING

TARGET PEST	INSECT HOSTS	TRAPS PLACED	SERVICINGS
Medfly	Fruit Trees	230	2,559
Melon Fruit Fly	Vegetable Gardens	86	831
Mexican Fruit Fly	Fruit Trees	98	2,354
Oriental Fruit Fly	Fruit Trees	230	2,559
Misc. Fruit Fly	Fruits and Vegetables	91	989
Gypsy Moth	Shade Trees	169	602
Japanese Beetle	Turf, Rose	169	602
Trogoderma Beetle	High Hazard Commodities	20	240
Light Brown Apple Moth	Ornamental/Commercial Crops	3	2,042
European Grapevine Moth	Grapes	1,919	15,319
Asian Citrus Psyllid	Citrus	538	5,306
Glassy Winged Sharpshooters	Nurseries/Urban Areas	590	3,432
TOTAL TRAPPING PROGRAM ACTIVITIES		**4,565**	**39,825**



MONTEREY COUNTY AGRICULTURAL COMMISSIONER'S OFFICE

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