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California Department of Food and Agriculture

Agricultural Commissioners' Crop Reports

# Madera County

2015-2017

# Madera County

## *Crop & Livestock Report*



**2015**

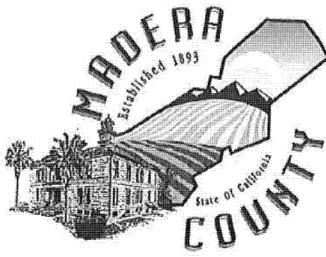
## **Madera County The Center of California**

The geographic center of California is located in Madera County. The exact center is close to the Madera County community of North Fork, some 40 miles east of the city of Madera. A monument marks the site.

A planting memorializing that the geographic center of California is in Madera County, is visible for travelers on Highway 99. In the median of Highway 99, north of the Avenue 9 ramps, is a palm tree to the south and a conifer tree to the north, signifying that the north and south divide of California resides in Madera County.

*\*For more information, you may go to <http://www.north-fork-chamber.com/> or <http://www.yosemitethisyear.com/>*





# Madera County Department of Agriculture Weights and Measures

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Stephanie "Stevie" McNeill, Agricultural Commissioner  
Sealer of Weights and Measures

Karen Ross, Secretary  
California Department of Food and Agriculture

and

The Honorable Board of Supervisors  
County of Madera, California

Rick Farinelli	Chairman, District 3
Brett Frazier	District 1
David Rogers	District 2
Max Rodriguez	District 4
Tom Wheeler	District 5

It is my pleasure to present the 2015 Madera County Agricultural Crop and Livestock Report. This annual statistical report is compiled in accordance with Sections 2271 and 2279 of the California Food and Agricultural Code, and contains data on the acreage, yield, and values of Madera County Agricultural commodities. The values in this report are gross values, and do not represent net income or loss to producers.

For 2015, the gross value of all production was \$2,017,446,000; this is a decrease of \$248,435,000 (10.96%) compared to 2014 production. This is mainly due to a decrease in some commodity prices as market prices stabilized.

Crop values can vary from year to year due to the variables of production, market and weather conditions. Almonds (nut meats & hulls) retained the top crop rank for the sixth year in a row, with a value of \$787,609,000; although there was a price decrease per ton from 2014, this was somewhat offset by an increase in bearing acreage. Grapes overtook milk for 2<sup>nd</sup> place, and milk claimed the third spot. Pistachios and Cattle & Calves came in at the 4<sup>th</sup> and 5<sup>th</sup> rankings.

Although a decrease was seen in Madera County farmgate values in 2015 compared to 2014, it's of note that for the 2<sup>nd</sup> year in a row, the production value exceeds two billion dollars. It's outstanding that Madera County is now ranked number nine among the fifty-eight California counties in total agricultural production.

I wish to extend my appreciation to our Madera County farmers, ranchers, agricultural industries and agencies. Without their efforts and contributions of information, this report would not be possible. Additionally, I would like to express my thanks to my staff that contributed to compiling and preparing this report, and especially to Senior Agricultural and Standards Inspector Cha Vang and his dedication to producing the annual report.

To view the 2015 Madera County Agricultural and Livestock Report, and previous reports, please visit our website online at <http://madera-county.com/agcommissioner/cropreports/index.html>.

Respectfully submitted,

A handwritten signature in cursive script that reads "Stevie McNeill".

Stevie McNeill  
Agricultural Commissioner/Sealer

# MADERA COUNTY STAFF

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## Madera County Board of Supervisors

**Brett Frazier**

District 1

**David Rogers**

District 2

**Rick Farinelli**

District 3 /Chairman

**Max Rodriguez**

District 4

**Tom Wheeler**

District 5

## County Administrative Officer

Eric Fleming

## Agricultural Commissioner/ Sealer of Weights & Measures

Stephanie "Stevie" McNeill

## Deputy Agricultural Commissioner/Sealer

Heidi Wong

## Supervising Agricultural & Standards Inspector

Gavin Iacono

## Agricultural & Standards Inspectors

Judy Cumming

Sharon Seslowe

Molly Glover

Alison Steen

Lance B. Hofer

Cha Vang

## Agricultural & Standards Technicians

Bobby Arias

Gabriel Mejia

## Administrative Support Staff

Steve Monk, Administrative Analyst II

Tammy Dodson, Program Assistant II

Mary Arias, Program Assistant I

# TABLE OF CONTENTS

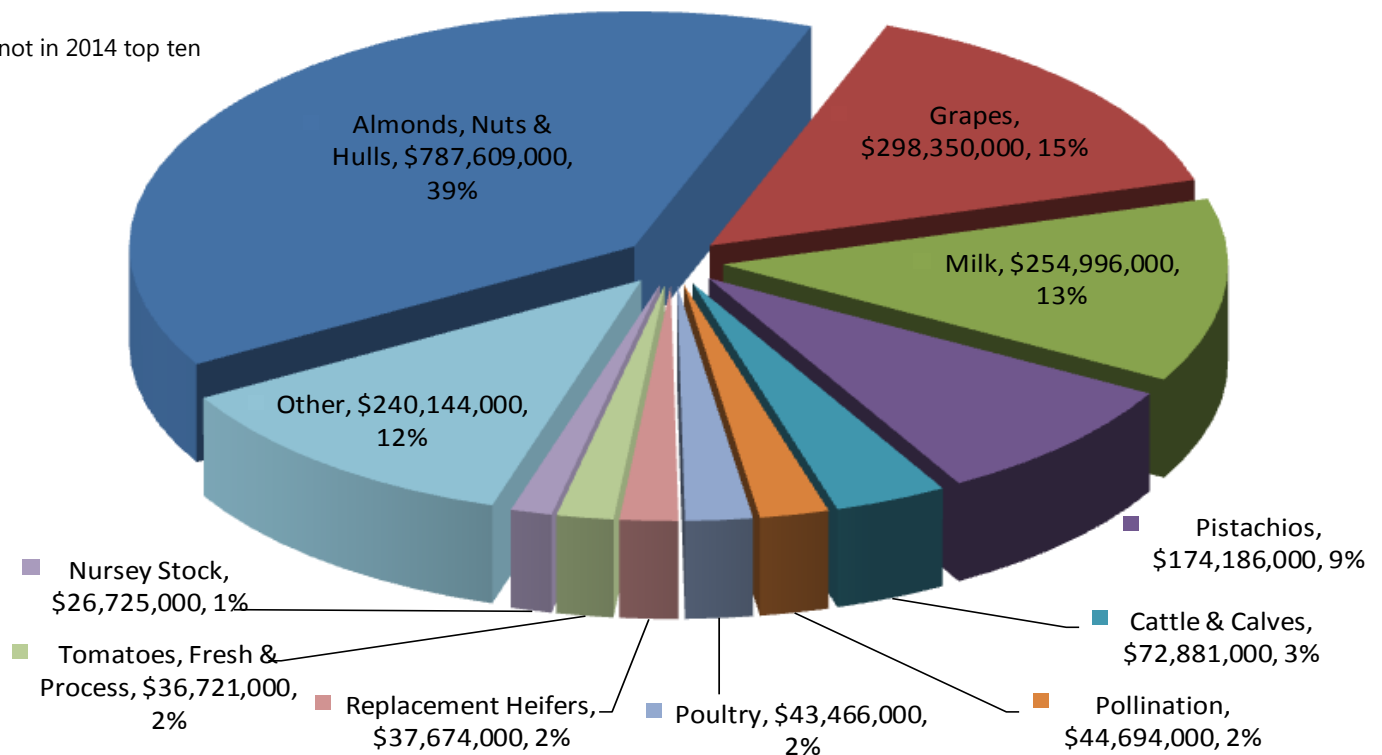
Madera County The Center of California	Inside Cover
Letter from the Commissioner	1
County Administration/Ag. Commissioner Staff	2
Table of Contents	3
Ten Leading Crops	4
Field Crops	5
Vegetable Crops	6
Fruit & Nut Crops	7
Forest Products	9
Nursery Products	9
Apiary Products	9
Livestock & Poultry	10
Livestock & Poultry Products	10
Crop Report Summary	11
Madera County Highlights	12
Sustainable Agriculture Report 1	13
Sustainable Agriculture Report 2	14
Countries Receiving Madera County Commodities	15
Madera County Commodities Exported	15
Rainfall - Madera, California (1966-2015)	16

# TEN LEADING CROPS MADERA COUNTY 2015

Commodity	2015 Rank	2015 Dollar Value	2014 Rank
Almonds, Nuts & Hulls	1	\$787,609,000	1
Grapes	2	\$298,350,000	3
Milk	3	\$254,996,000	2
Pistachios	4	\$174,186,000	4
Cattle & Calves	5	\$72,881,000	5
Pollination	6	\$44,694,000	7
Poultry	7	\$43,466,000	6
Replacement Heifers	8	\$37,674,000	8
Tomatoes, Fresh & Process	9	\$36,721,000	*
Nursery Stock	10	\$26,725,000	*

Diversity, which serves to strengthen the agricultural economy of Madera County, is evident in this listing of our Ten Leading Crops, which include fruit and nut crops, milk, field crops, nursery stock, poultry, pollination, and dairy and beef cattle. The wide range of commodities produced in our county is further underscored by that segment on the chart entitled "Other," which includes such diverse products as alfalfa, cotton, honey, citrus and stone fruits, beeswax and walnuts.

\* not in 2014 top ten





# Field Crops

Item	Year	PRODUCTION			VALUE		
		Harvested Acreage	Per Acre	Total	Unit	Per Unit	Total
<b>Alfalfa</b>							
Hay	2015	16,000	7.11	113,760	Ton	\$188.00	\$21,387,000
	2014	16,000	6.80	108,800	Ton	231.00	25,133,000
Silage <sup>a</sup>	2015			28,120	Ton	53.00	1,490,000
	2014			20,287	Ton	70.00	1,420,000
Total	2015	16,000					22,877,000
	2014	16,000					26,553,000
<b>Corn</b>							
Grain	2015	300	4.50	1,350	Ton	220.00	297,000
	2014	600	7.55	4,530	Ton	230.00	1,042,000
Silage	2015	16,600	26.75	444,050	Ton	53.00	23,535,000
	2014	18,300	25.86	473,238	Ton	59.00	27,921,000
Total	2015	16,900					23,832,000
	2014	18,900					28,963,000
<b>Cotton</b>							
Lint	2015	700	2,013 <sup>b</sup>	2,936	Bale <sup>c</sup>	0.91 <sup>d</sup>	1,282,000
	2014	740	1,863	2,872	Bale	0.95	1,310,000
Seed	2015			1,174	Ton	296.00	348,000
	2014			1,149	Ton	300.00	345,000
Total	2015	700					1,630,000
	2014	740					1,655,000
<b>Oat</b>							
Hay	2015	1,100	3.33	3,663	Ton	132.00	484,000
	2014	800	3.53	2,824	Ton	185.00	522,000
<b>Pasture</b>							
Irrigated	2015	1,300			Acre	150.00	195,000
	2014	1,500			Acre	150.00	225,000
Rangeland	2015	390,000			Acre	13.00	5,070,000
	2014	389,900			Acre	8.50	3,314,000

a/ Alfalfa acreage yields both hay and silage

b/ Pounds

c/ Bale: 480 pounds

d/ Price per pound

## Field Crops

### PRODUCTION

### VALUE

Item	Year	Harvested Acreage	Per Acre	Total	Unit	Per Unit	Total
<b>Wheat</b>							
Grain	2015	2,200	4.00	8,800	Ton	\$220.00	\$1,936,000
	2014	2,600	3.01	7,826	Ton	285.00	2,230,000
Silage	2015	22,400	13.15	294,560	Ton	43.00	12,666,000
	2014	18,200	14.86	270,452	Ton	38.00	10,277,000
Total	2015	24,600					14,602,000
	2014	20,800					12,507,000
Winter Forage	2015	1,900	14.32	27,208	Ton	43.00	1,170,000
	2014	3,300	17.46	57,618	Ton	48.00	2,766,000
Miscellaneous <sup>e</sup>	2015	3,100					3,710,000
	2014	2,300					3,587,000
<b>TOTAL</b>	2015	455,600					\$73,570,000
	2014	454,200					80,092,000

e/ Includes corn nuts, dried beans, sorghum/milo silage, seed crops, sudangrass, wheat hay, field and stubble straw.

## Vegetable Crops

### PRODUCTION

### VALUE

Item	Year	Harvested Acreage	Per Acre	Total	Unit	Per Unit	Total
<b>Tomatoes</b>							
Fresh	2015	600	25.19	15,114	Ton	\$456.00	\$6,892,000
	2014	600	16.25	9,750	Ton	525.00	5,119,000
Processed	2015	7,600	49.68	377,579	Ton	79.00	29,829,000
	2014	5,600	58.65	328,440	Ton	79.00	25,947,000
Total	2015	8,200					36,721,000
	2014	6,200					31,066,000
Miscellaneous <sup>a</sup>	2015	2,400					13,816,000
	2014	2,000					18,212,000
<b>TOTAL</b>	2015	10,600					\$50,537,000
	2014	8,200					49,278,000

a/ Includes artichokes, carrots, all cabbage, garlic, herbs, melons, onions, all peppers, potatoes, all squash and miscellaneous truck crops.

# FRUIT & NUT CROPS

## PRODUCTION

## VALUE

Item	Year	Harvested Acreage	Per Acre	Total	Unit	Per Unit	Total
<b>Almonds<sup>a</sup></b>	<b>2015</b>	<b>115,000</b>	<b>0.95</b>	<b>109,250<sup>b</sup></b>	<b>Ton</b>	<b>\$6,976.00</b>	<b>\$762,128,000</b>
	2014	106,000	0.94	99,640	Ton	7,455.00	742,816,000
<b>Almond Hulls</b>	<b>2015</b>			<b>214,130</b>	<b>Ton</b>	<b>119.00</b>	<b>25,481,000</b>
	2014			195,294	Ton	145.00	28,318,000
<b>Cherries</b>	<b>2015</b>	<b>590</b>	<b>5.01</b>	<b>2,956</b>	<b>Ton</b>	<b>4,800.00</b>	<b>14,189,000</b>
	2014	480	0.42	202	Ton	6,983.00	1,411,000
<b>Figs, Fresh &amp; Dried</b>	<b>2015</b>	<b>5,500</b>	<b>1.93</b>	<b>10,615</b>	<b>Ton</b>	<b>2,290.00</b>	<b>24,308,000</b>
	2014	5,600	1.73	9,688	Ton	2,037.00	19,734,000
<b>Grapes</b>							
<b>Raisin Varieties</b>							
<b>Crushed</b>	<b>2015</b>	<b>2,600</b>	<b>10.91</b>	<b>28,366</b>	<b>Ton</b>	<b>202.00</b>	<b>5,730,000</b>
	2014	6,200	7.25	44,950	Ton	213.00	9,574,000
<b>Dried</b>	<b>2015</b>	<b>20,500</b>	<b>3.05</b>	<b>62,525</b>	<b>Ton</b>	<b>1,484.00</b>	<b>92,787,000</b>
	2014	20,700	3.12	64,584	Ton	1,692.00	109,276,000
<b>Fresh</b>	<b>2015</b>	<b>900</b>	<b>9.82</b>	<b>8,838</b>	<b>Ton</b>	<b>1,392.00</b>	<b>12,302,000</b>
	2014	920	9.79	9,007	Ton	1,484.00	13,366,000
<b>Table Varieties</b>	<b>2015</b>	<b>3,100</b>	<b>9.10</b>	<b>28,210</b>	<b>Ton</b>	<b>1,873.00</b>	<b>52,837,000</b>
	2014	2,900	9.52	27,608	Ton	1,929.00	53,256,000
<b>Wine Varieties<sup>c</sup></b>							
<b>Red Varieties</b>	<b>2015</b>	<b>23,500</b>	<b>11.32</b>	<b>266,020</b>	<b>Ton</b>	<b>311.00</b>	<b>82,732,000</b>
	2014	24,200	9.79	236,918	Ton	347.00	82,211,000
<b>White Varieties</b>	<b>2015</b>	<b>15,500</b>	<b>11.60</b>	<b>179,800</b>	<b>Ton</b>	<b>289.00</b>	<b>51,962,000</b>
	2014	16,100	9.61	154,721	Ton	322.00	49,820,000
<b>Total Grapes</b>	<b>2015</b>	<b>66,100</b>					<b>298,350,000</b>
	2014	71,020					317,503,000
<b>Olives</b>	<b>2015</b>	<b>740</b>	<b>4.20</b>	<b>3,108</b>	<b>Ton</b>	<b>682.00</b>	<b>2,120,000</b>
	<b>Fresh &amp; Oil</b>	2014	590	1.54	909	Ton	458.00

a/ Meat basis

b/ Reflects total production, including imperfect stock; price weighted accordingly

c/ Includes table grape crushed

# FRUIT & NUT CROPS

Item	Year	PRODUCTION			VALUE		
		Harvested Acreage	Per Acre	Total	Unit	Per Unit	Total
<b>Oranges</b>	<b>2015</b>	<b>2,900</b>	<b>15.27</b>	<b>44,283</b>	<b>Ton</b>	<b>\$469.00</b>	<b>\$20,769,000</b>
	2014	2,900	13.08	37,932	Ton	456.00	17,297,000
<b>Peaches</b>							
<b>Cling</b>	<b>2015</b>	<b>280</b>	<b>16.00</b>	<b>4,480</b>	<b>Ton</b>	<b>460.00</b>	<b>2,061,000</b>
	2014	220	14.20	3,124	Ton	388.00	1,212,000
<b>Freestone</b>	<b>2015</b>	<b>320</b>	<b>17.22</b>	<b>5,510</b>	<b>Ton</b>	<b>946.00</b>	<b>5,212,000</b>
	2014	470	17.97	8,446	Ton	514.00	4,341,000
<b>Total</b>	<b>2015</b>	<b>600</b>					<b>7,273,000</b>
	2014	690					5,553,000
<b>Pistachios</b>	<b>2015</b>	<b>32,700</b>	<b>0.92</b>	<b>30,084<sup>b</sup></b>	<b>Ton</b>	<b>5,790.00</b>	<b>174,186,000</b>
	2014	31,000	1.58	48,980	Ton	5,956.00	291,725,000
<b>Plums, Dried</b>	<b>2015</b>	<b>920</b>	<b>1.88</b>	<b>1,730</b>	<b>Ton</b>	<b>2,139.00</b>	<b>3,700,000</b>
	2014	890	1.55	1,380	Ton	2,347.00	3,239,000
<b>Walnuts</b>	<b>2015</b>	<b>1,900</b>	<b>1.70</b>	<b>3,221</b>	<b>Ton</b>	<b>1,822.00</b>	<b>5,869,000</b>
	2014	1,900	1.46	2,778	Ton	3,960.00	11,001,000
<b>Miscellaneous</b>							
<b>Fruits &amp; Nuts<sup>d</sup></b>	<b>2015</b>	<b>8,300</b>					<b>63,658,000</b>
	2014	8,900					66,688,000
<b>Orchard</b>	<b>2015</b>			<b>5,500</b>	<b>Cord<sup>e</sup></b>		<b>908,000</b>
<b>Firewood</b>	2014			6,000	Cord		930,000
<b>TOTAL</b>	<b>2015</b>	<b>235,250</b>					<b>\$1,402,939,000</b>
	2014	229,970					1,506,631,000

d/ Includes apples, apricots, berries, kiwis, nectarines, pears, pecans, persimmons, plums, pomegranates, tangelos, tangerines, almond and walnut shells

e/ Cord: 128 Cubic feet

## APIARY PRODUCTS

Item	Year	PRODUCTION		VALUE	
		Total	Unit	Per Unit	Total
<b>Apiary Products</b>					
Beeswax	2015	82,773	Pound	\$3.40	\$281,000
	2014	117,048	Pound	3.60	421,000
Honey	2015	712,271	Pound	2.20	1,567,000
	2014	969,545	Pound	2.56	2,482,000
Pollination	2015	234,000	Colony	191.00	44,694,000
	2014	216,000	Colony	179.00	38,664,000
<b>TOTAL</b>	2015				<b>\$46,542,000</b>
	2014				41,567,000

## FOREST PRODUCTS

Item	Year	PRODUCTION		VALUE	
		Production	Unit		Total
Timber	2015	8,071	MBF <sup>a</sup>		\$721,000
	2014	2,348	MBF		240,000
Firewood <sup>b</sup>	2015	5,800	Cord <sup>c</sup>		334,000
	2014	5,447	Cord		261,000
<b>TOTAL</b>	2015				<b>\$1,055,000</b>
	2014				501,000

a/ MBF: Thousand board feet

b/ Includes: Christmas trees, greenery, pinecones and saw logs

c/ Cord: 128 Cubic feet

## NURSERY PRODUCTS

Item	Year	PRODUCTION		VALUE	
		Field Acres	House Sq. Foot		Total
Nursery Stock <sup>a</sup>	2015	270	229,000		\$26,725,000
	2014	320	199,000		23,178,000

a/ Includes grapevines, fruit trees, nut trees and ornamentals

# LIVESTOCK AND POULTRY

## PRODUCTION

## VALUE

Item	Year	PRODUCTION			VALUE	
		Head	Liveweight	Unit	Per Unit	Total
Cattles and Calves <sup>a</sup>	2015	76,200	547,980	CWT <sup>b</sup>	\$133.00	\$72,881,000
	2014	76,400	532,200	CWT	115.00	61,203,000
Replacement Heifers <sup>c</sup>	2015	27,300			1,380.00	37,674,000
	2014	27,700			1,345.00	37,257,000
Poultry	2015					43,466,000
	2014					44,140,000
<b>TOTAL</b>	2015					\$154,021,000
	2014					142,600,000

a/ Range and dairy cattle sold for beef

b/ Hundredweight: 100 pounds

c/ Milk cows

# LIVESTOCK AND POULTRY PRODUCTS

## PRODUCTION

## VALUE

Item	Year	PRODUCTION			VALUE	
		Production	Unit	Per Unit	Total	
Milk Market <sup>a</sup>	2015	18,361,444	CWT	\$13.86	\$254,490,000	
	2014	18,858,570	CWT	21.93	413,568,000	
Milk Manufacturing <sup>a</sup>	2015	29,378	CWT	17.22	506,000	
	2014	48,333	CWT	22.97	1,110,000	
Other Products <sup>b</sup>	2015				7,061,000	
	2014				7,356,000	
<b>TOTAL</b>	2015				\$262,057,000	
	2014				422,034,000	

a/ Madera County has 41 dairies, with 70,909 lactating cows

b/ Includes: aquaculture, market eggs, hogs, manure, sheep, lambs and wool

# AGRICULTURAL CROP REPORT SUMMARY

## MADERA COUNTY 2015

Item	Year	Harvested	Total Value
<b>Apiary</b>	<b>2015</b>		<b>\$46,542,000</b>
	2014		41,567,000
<b>Field Crops</b>	<b>2015</b>	<b>455,600</b>	<b>73,570,000</b>
	2014	454,240	80,092,000
<b>Fruit and Nut Crops</b>	<b>2015</b>	<b>235,250</b>	<b>1,402,939,000</b>
	2014	229,970	1,506,631,000
<b>Forest Products</b>	<b>2015</b>		<b>1,055,000</b>
	2014		501,000
<b>Livestock and Poultry</b>	<b>2015</b>		<b>154,021,000</b>
	2014		142,600,000
<b>Livestock and Poultry Products</b>	<b>2015</b>		<b>262,057,000</b>
	2014		422,034,000
<b>Nursery Products</b>	<b>2015</b>	<b>270</b>	<b>26,725,000</b>
	2014	320	23,178,000
<b>Vegetable Crops</b>	<b>2015</b>	<b>10,600</b>	<b>50,537,000</b>
	2014	8,200	49,278,000
<b>TOTAL</b>	<b>2015</b>		<b>\$2,017,446,000</b>
	2014		2,265,881,000

## MADERA COUNTY HIGHLIGHTS

County Established	March 11, 1893
County Seat	Madera (city)
Population <sup>a</sup>	154,998

<b>Total County Acreage</b>	1,366,925
2014 Harvested Acreage	701,720
Field Crop Acreage	65,600
Fruit and Nut Acreage	235,250
Nursery Acreage	270
Rangeland Acreage	390,000
Vegetable Acreage	10,600
Forest Acreage	414,300
U. S. Parkland Acreage	83,000

### **Bordering Counties**

Merced County	Northwest
Mariposa County	North
Mono County	East
Fresno County	South and West

### **Ranking of Madera County Among Counties of California**

Population <sup>a</sup>	33
Total Acreage	24
Total Agricultural Production <sup>b</sup>	9
Commodity, by Value	
Figs	1
Grapes, Raisin Variety	2
Pistachios	4
Almonds	5
Grapes, Table Variety	5
Grapes, Wine Variety	7
Cattles & Calves	7
Corn, Silage	7
Milk, Market	8
Olives	9

### **Ranking of Madera County Among Counties of the United States**

Total Agricultural Production <sup>c</sup>	21
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a/ US Bureau of Census, 2015 Estimate

b/ County Agricultural Commissioner's Data, 2014

c/ USDA Ag Census, 2007

Madera County Crop Reports from 2001 to 2015 are available at:  
<http://www.madera-county.com/index.php/publications/crop-reports>



# 2015 Sustainable Agriculture Report 1

## Pest Prevention

Pest prevention programs are mandated by the California Food and Agricultural Code to prevent the introduction and spread of pests in California. Pest prevention involves three strata: pest exclusion, pest detection and integrated pest management.

The **Pest Exclusion Program** prevents the introduction of injurious pests that are not of common occurrence in the county.

Over 56 beehive shipments received from Red Imported Fire Ants (RIFA) infested states, with over 26,800 beehives inspected for RIFA.

Countries receiving agricultural commodities require certification that the commodities are free from potentially injurious pests. Over 4,200 phytosanitary inspections were performed on Madera County commodities, which were exported to over 70 countries.

The State of California's **Pest Detection Program** utilizes insect traps and surveys for the detection of foreign pests which may have eluded exclusion efforts.

The trapping program targeted multiple pests, including the following:

Caribbean Fruit Fly (*Anastrepha suspens*)

European Corn Borer (*Ostrinia nubilalis*)

Gypsy Moth (*Lymentria dispar*)

Japanese Beetle (*Popillia japonica*)

Light Brown Apple Moth (*Epiphyas postvittana*)

Mediterranean Fruit Fly (*Ceratitis capitata*)

Melon Fruit Fly (*Dacus cucurbitae*)

Mexican Fruit Fly (*Anastrepha ludens*)

Oriental Fruit Fly (*Bactrocera dorsalis*)

The **Integrated Pest Control Program** strives to eradicate infestations of new pests before they become widespread. Pink Bollworm (*Pectinophora gossypiella*) a non-established and economically significant pest of cotton, is controlled by post-season plowdown of cotton plants. Pink Bollworm was controlled by post-season plowdown of over 700 acres of cotton plantings.

# 2015 Sustainable Agriculture Report 2

## Pest Management

The **Glassy-winged Sharpshooter Program** serves to detect and control the vector of Pierce's Disease, a potentially catastrophic disease of vineyards. This program involved the placement of traps in both urban and agricultural sites followed by subsequent trap servicing. In addition, incoming shipments of host material and susceptible county plantings were inspected.

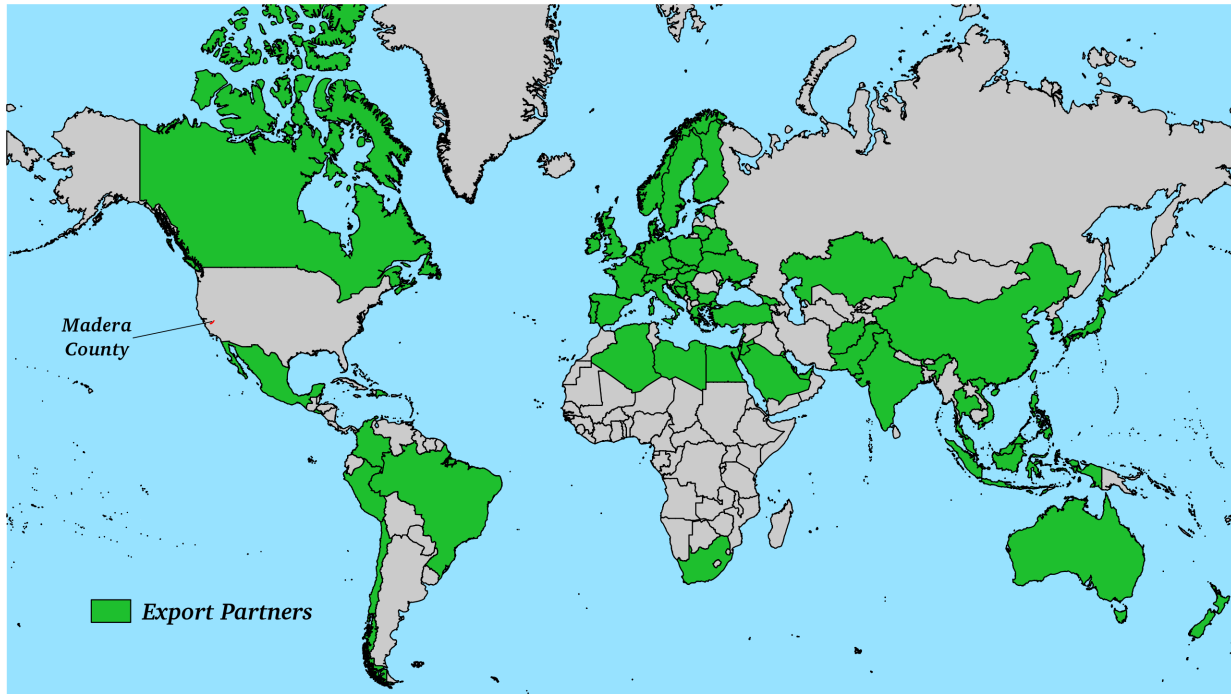
Multiple Glassy-winged Sharpshooters were found in Madera County in 2015, which led to additional placement of delimitation traps also followed by subsequent trap servicing.

Additionally, the California Department of Food and Agriculture (CDFA) released three parasitic wasps (*Gonatocerus triguttatus*, *G. morgani* and *G. morrilli*) in 2015 to aid in the control of the Glassy-winged Sharpshooters. Over one hundred and fifty parasitoids were released in the Wildwood and Rolling Hills areas.

Fifty **Organic Farms**, totaling over 29,800 acres, which includes 18,400 acres in rangeland and 3,000 acres in irrigated pasture, and 7 handlers were registered in Madera County in 2015. Utilizing organic principles defined in the California Organic Products Act of 2003, these farms produce a wide array of commodities, such as:

*alfalfa, almonds, apples, apricots, artichokes, basil, dried beans, green beans, beets, berries, broccoli, cabbage, cantaloupe, carrots, cauliflower, chard, cherries, cilantro, collards greens, coriander, sweet corn, cucumbers, daikon, dill, fennel, figs, garlic, gourds, grapes (table, raisin, wine), grapefruit, hay, herbs, kale, kiwifruit, kohlrabi, leeks, lemons, lettuce, livestock, mustard greens, oats, okra, olives, onions, oranges, parsley, pasture, peas, peppers, persimmons, pistachio, plums, pomegranates, popcorn, potatoes, poultry, prunes, pumpkins, radish, rutabagas, seed crops, spinach, squash, tomatillos, tomatoes, turnips, walnuts, watermelons, and wheat.*

The value of organic production in Madera County in 2015 was **\$41,092,000.**



**Countries Receiving Madera County Commodities:**

<b>Afghanistan</b>	<b>Dominican Republic</b>	<b>Jordan</b>	<b>Qatar</b>
<b>Algeria</b>	<b>Egypt</b>	<b>Kazakhstan</b>	<b>Saudi Arabia</b>
<b>Australia</b>	<b>EL Salvador</b>	<b>Korea, Republic of</b>	<b>Serbia</b>
<b>Austria</b>	<b>Estonia</b>	<b>Kuwait</b>	<b>Singapore</b>
<b>Bahrain</b>	<b>Finland</b>	<b>Lebanon</b>	<b>Slovakia</b>
<b>Belarus</b>	<b>France</b>	<b>Libya</b>	<b>South Africa</b>
<b>Belgium</b>	<b>French Polynesia</b>	<b>Lithuania</b>	<b>Spain</b>
<b>Bosnia and Herzegovina</b>	<b>Georgia</b>	<b>Malaysia</b>	<b>Sweden</b>
<b>Brazil</b>	<b>Germany</b>	<b>Mauritius</b>	<b>Switzerland</b>
<b>Bulgaria</b>	<b>Greece</b>	<b>Mexico</b>	<b>Taiwan</b>
<b>Canada</b>	<b>Hong Kong</b>	<b>Netherlands</b>	<b>Thailand</b>
<b>Chile</b>	<b>Hungary</b>	<b>New Zealand</b>	<b>Trinidad and Tobago</b>
<b>China</b>	<b>India</b>	<b>Norway</b>	<b>Turkey</b>
<b>Colombia</b>	<b>Indonesia</b>	<b>Pakistan</b>	<b>Ukraine</b>
<b>Croatia</b>	<b>Ireland</b>	<b>Peru</b>	<b>United Arab Emirates</b>
<b>Cyprus</b>	<b>Israel</b>	<b>Philippines</b>	<b>United Kingdom</b>
<b>Czech Republic</b>	<b>Italy</b>	<b>Poland</b>	<b>Vietnam</b>
<b>Denmark</b>	<b>Japan</b>	<b>Portugal</b>	

**Madera County Commodities Exported:**

<b>Almonds</b>	<b>Masa (Corn Flour)</b>	<b>Raisins</b>
<b>Figs</b>	<b>Pistachios</b>	<b>Tillandsia (Plants)</b>
<b>Grapes</b>	<b>Plums</b>	<b>Walnuts</b>
<b>Kiwifruit</b>	<b>Prunes</b>	

## RAINFALL - MADERA, CALIFORNIA (1966 - 2015)

YEAR	JUL	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	TOTAL
1966-67	0.07	0.00	0.09	0.00	1.90	3.29	3.51	0.02	1.72	5.47	0.20	0.45	16.72
1967-68	0.00	0.00	0.10	0.02	1.37	1.45	0.84	1.57	1.58	1.02	0.31	0.00	8.26
1968-69	0.00	0.03	0.00	1.22	2.26	3.24	5.69	4.37	1.60	1.74	0.02	0.00	20.17
1969-70	0.07	0.00	0.13	0.52	1.01	1.45	3.42	0.84	2.09	0.21	0.00	0.19	9.93
1970-71	0.00	0.00	0.00	0.24	1.97	2.85	0.45	0.22	1.01	0.83	1.77	0.00	9.34
1971-72	0.00	0.00	0.02	0.04	0.58	1.72	0.19	0.70	0.00	0.56	0.03	0.05	3.89
1972-73	0.02	0.00	0.14	0.49	4.07	1.40	2.23	3.71	2.98	0.39	0.00	0.02	15.45
1973-74	0.00	0.00	0.00	1.55	1.15	2.36	2.26	0.42	2.32	0.72	0.00	0.00	10.78
1974-75	0.00	0.00	0.00	1.10	0.52	1.54	0.43	1.56	2.17	1.81	0.00	0.00	9.13
1975-76	0.00	0.15	0.19	1.26	0.34	0.10	0.10	3.64	0.64	1.60	0.00	0.00	8.02
1976-77	0.05	0.27	0.94	0.66	0.87	1.18	0.60	0.22	1.05	0.00	0.77	0.00	6.61
1977-78	0.00	0.00	0.00	0.00	0.58	2.36	3.14	4.27	5.04	2.90	0.00	0.00	18.29
1978-79	0.02	0.00	1.61	0.03	3.04	0.54	3.97	3.18	2.14	0.11	0.12	0.00	14.76
1979-80	0.00	0.00	0.00	0.66	1.00	1.50	3.61	3.81	1.50	0.63	0.25	0.00	12.96
1980-81	0.00	0.00	0.00	0.12	0.26	0.58	2.74	0.76	3.42	1.03	0.00	0.00	8.91
1981-82	0.00	0.00	0.00	1.36	1.99	0.81	1.97	1.42	3.44	2.94	0.00	0.20	14.13
1982-83	0.00	0.00	0.84	1.29	3.16	1.78	4.97	3.40	5.12	1.90	0.83	0.00	23.29
1983-84	0.00	0.00	0.22	0.66	2.58	2.45	0.35	1.48	0.59	0.18	0.00	0.00	8.51
1984-85	0.00	0.00	0.00	0.87	2.37	2.12	0.59	0.71	1.65	0.52	0.00	0.34	9.17
1985-86	0.00	0.12	0.11	0.54	2.76	1.03	1.37	5.22	3.16	0.51	0.15	0.00	14.97
1986-87	0.00	0.00	0.43	0.00	0.00	0.97	1.60	2.26	2.91	0.36	0.03	0.02	8.58
1987-88	0.00	0.00	0.00	1.96	0.48	1.52	0.90	0.50	0.59	2.03	0.29	0.03	8.30
1988-89	0.00	0.00	0.00	0.00	1.42	2.04	0.40	1.20	2.13	0.17	0.11	0.00	7.47
1989-90	0.00	0.03	0.94	0.55	0.54	0.00	2.32	1.38	0.71	1.41	2.36	0.00	10.24
1990-91	0.00	0.00	0.04	0.03	0.53	0.64	0.15	1.25	7.11	0.17	0.05	0.01	9.98
1991-92	0.00	0.02	0.00	0.87	0.23	1.08	1.43	2.88	2.13	0.02	0.00	0.00	8.66
1992-93	0.09	0.00	0.00	1.33	0.04	3.08	5.16	2.69	2.92	0.32	0.71	0.43	16.77
1993-94	0.00	0.00	0.00	0.06	0.77	1.39	1.85	1.77	0.43	1.89	2.61	0.00	10.77
1994-95	0.00	0.00	0.13	1.41	1.61	1.36	5.18	0.71	4.82	1.21	0.79	0.48	17.70
1995-96	0.00	0.00	0.00	0.00	0.00	2.42	2.62	3.98	2.34	0.84	0.52	0.32	13.04
1996-97	0.00	0.00	0.00	1.83	2.55	5.02	5.05	0.19	0.00	0.00	0.00	0.00	14.64
1997-98	0.00	0.01	0.13	0.00	2.55	1.65	4.22	5.69	4.26	2.03	1.38	0.74	22.66
1998-99	0.00	0.00	0.88	0.19	0.34	0.95	2.18	1.67	0.63	1.62	0.06	0.05	8.57
1999-00	0.00	0.00	0.00	0.00	0.61	0.08	3.59	6.13	1.35	1.26	0.16	0.46	13.64
2000-01	0.00	0.00	0.27	2.82	0.07	0.13	2.33	1.98	1.71	1.08	0.00	0.00	10.39
2001-02	0.02	0.00	0.02	0.51	1.89	2.42	1.40	0.34	1.14	0.23	0.33	0.22	8.52
2002-03	0.00	0.00	0.00	0.00	2.80	2.85	0.51	1.51	0.64	1.74	0.87	0.00	10.92
2003-04	0.00	0.06	0.00	0.00	0.34	2.88	0.95	2.20	0.56	0.00	0.00	0.00	6.99
2004-05	0.00	0.00	0.00	3.89	1.07	3.67	2.10	3.04	2.59	0.60	3.32	0.00	20.28
2005-06	0.00	0.04	0.01	0.00	0.00	2.49	3.10	0.65	3.80	2.55	0.00	0.00	12.64
2006-07	0.00	0.00	0.00	0.40	0.56	1.40	0.65	1.86	0.57	0.35	0.05	0.00	5.84
2007-08	0.00	0.00	0.15	0.32	0.09	2.13	2.78	2.21	0.00	0.00	0.26	0.00	7.94
2008-09	0.00	0.00	0.00	0.00	1.19	1.27	1.95	3.24	0.83	0.00	0.00	0.00	8.48
2009-10	0.00	0.00	0.06	1.14	0.17	2.69	2.48	2.77	2.04	2.69	0.22	0.00	14.26
2010-11	0.00	0.00	0.00	0.21	2.31	5.40	1.88	1.50	4.17	0.24	0.45	1.41	17.57
2011-12	0.00	0.00	0.00	0.72	0.89	0.08	0.89	0.46	2.92	2.61	0.00	0.12	8.69
2012-13	0.00	0.00	0.00	0.07	1.84	3.42	1.33	0.74	0.12	0.98	0.06	0.00	8.56
2013-14	0.00	0.00	0.02	0.07	0.25	0.23	0.32	2.16	0.48	1.11	0.00	0.00	4.64
2014-15	0.00	0.00	0.04	0.00	1.06	2.41	0.00	0.66	0.01	0.94	0.45	0.00	5.57
2015-16	0.02	0.00	0.14	0.29	1.81	2.24	4.14	0.46	3.84	3.14	0.01	0.02	16.11
<b>Average</b>	<b>0.01</b>	<b>0.01</b>	<b>0.15</b>	<b>0.63</b>	<b>1.24</b>	<b>1.83</b>	<b>2.12</b>	<b>1.99</b>	<b>2.02</b>	<b>1.13</b>	<b>0.39</b>	<b>0.11</b>	<b>11.63</b>

**50 YEAR AVERAGE RAINFALL**



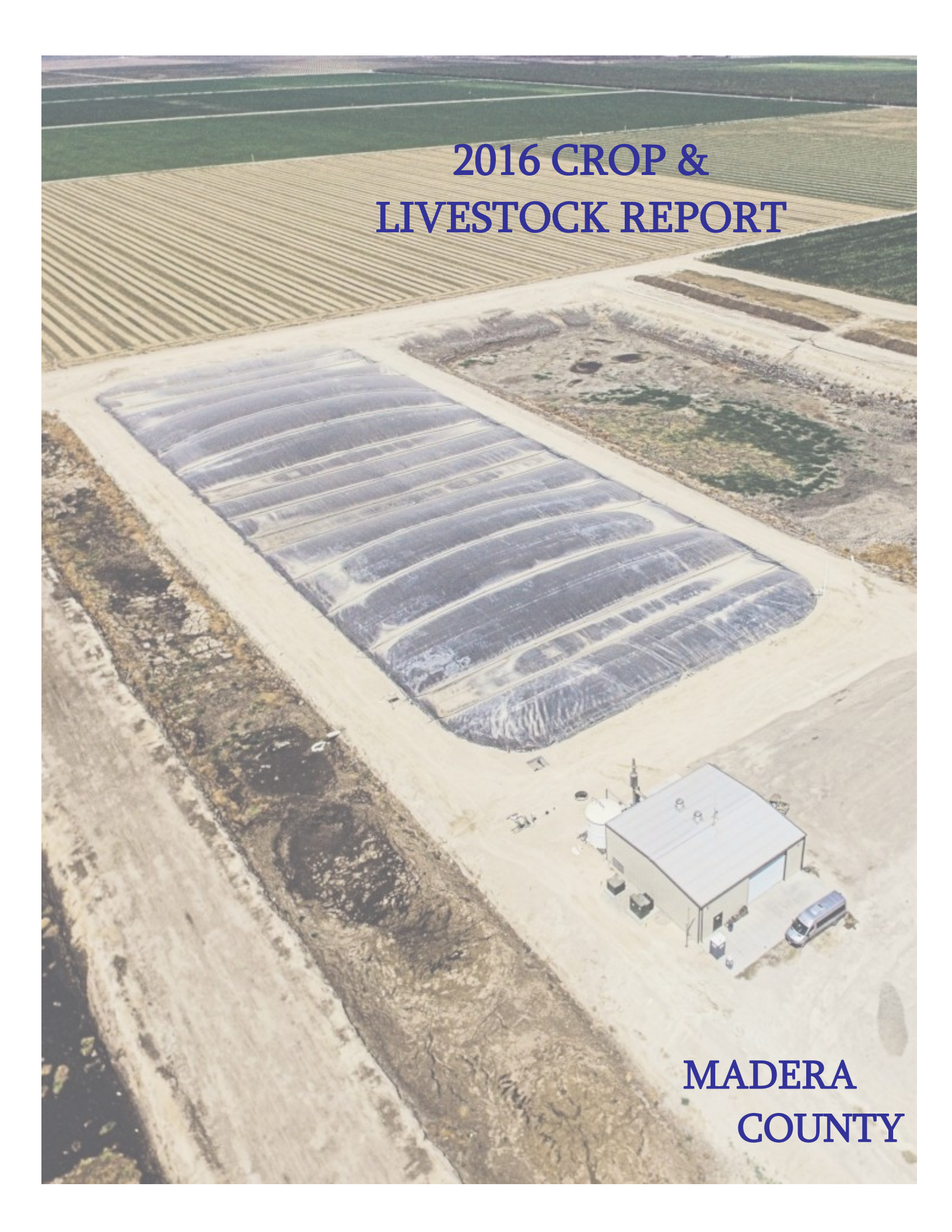
**DEPARTMENT OF AGRICULTURE / WEIGHTS & MEASURES**

**332 MADERA AVE**

**MADERA, CA 93637**

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**[WWW.MADERA-COUNTY.COM/INDEX.PHP/DEPARTMENT-OF-AG-HOME](http://WWW.MADERA-COUNTY.COM/INDEX.PHP/DEPARTMENT-OF-AG-HOME)**

An aerial photograph showing a large agricultural area. In the foreground, there is a large rectangular area covered with dark, curved plastic mulch, likely for crop production. To the right of this area is a smaller, irregularly shaped area with some vegetation and a dirt path. In the bottom right corner, there is a small, light-colored building with a grey roof, a white tank, and a silver van parked nearby. The background consists of vast, flat agricultural fields in various shades of green and brown, extending to the horizon under a clear sky.

**2016 CROP &  
LIVESTOCK REPORT**

**MADERA  
COUNTY**

## Cover Photo Credit:

Maas Energy Works of Redding, California - email: [info@maasenergy.com](mailto:info@maasenergy.com) - Website: [www.maasenergy.com](http://www.maasenergy.com)

## About the Verwey Family Dairy Digester in Madera County

Madera County is home to a new covered lagoon digester that is busy turning dairy wastewater into electricity. The project, located on Philip Verwey's dairy in Madera County is representative of the dairy industry's next steps towards reduced environmental impact. This project was one of five recently funded by the California Department of Food and Agriculture (CDFA) through its Dairy Digester Research and Development Program. These projects, designed to reduce odor and greenhouse gas emissions are triggering a wave of investment in Madera County and the San Joaquin Valley.

Dairy digesters are generally integrated into a dairy's existing waste water management system with a relatively elegant change. Instead of water sitting in settling ponds where the methane and carbon dioxide gas produced go to the atmosphere, the lagoon is lined and covered and the gas is captured and used. Since the methane produced is 22 times a more potent greenhouse gas than CO<sub>2</sub>, the capture and use of that methane has a significant impact on improving climate change. The project also removes pollutants such as sulfur and reduces NO<sub>x</sub> emissions, which will have a direct impact on local air quality.

This digester system provides enough energy to power a 600kW generator that produces 250,000 kWh of electricity a month. That is enough energy for the dairy farm's electricity needs, and would be enough to power 300 homes. It is claimed that the digester system will reduce the farm's emissions by 240,000 metric tons of carbon, equal to eliminating 5,000 cars from the road yearly.

This project was conceived nearly 10 years ago while Philip's son Brent was studying agricultural science at Cal Poly. After graduating, Brent researched the state of the art and worked to bring this technology to his father's larger dairy in Kings County, which has now been operating for almost a year. To do this, Brent worked with Daryl Maas of Maas Energy Works in Redding, California, and some other dairy contractors.

The next phase for the Verwey family is to bring the development experience gained at their Madera and Hanford dairies to other farms in the central valley. They are currently awaiting the results from the 2017 round of CDFA grants, and are hopeful to construct two more projects in Madera County, one in Merced County and another in Kings County.

In addition to providing a payment to the host farms, these projects and others like them will bring investment and jobs to the county and improve local air and water. The water board, air board and county agencies are actively supporting these projects with an eye on the broad benefits to the community.



# Madera County Department of Agriculture Weights and Measures

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Stephanie "Stevie" McNeill, Agricultural Commissioner  
Sealer of Weights and Measures

Karen Ross, Secretary  
California Department of Food and Agriculture

and

The Honorable Board of Supervisors  
County of Madera, California

Max Rodriguez Chairman, District 4  
Brett Frazier District 1  
David Rogers District 2  
Robert Poythress District 3  
Tom Wheeler District 5

It is my pleasure to present the 2016 Madera County Agricultural Crop and Livestock Report. This annual statistical report is compiled in accordance with Sections 2271 and 2279 of the California Food and Agricultural Code, and contains data on the acreage, yield, and values of Madera County Agricultural commodities. The values in this report are gross values, and do not represent net income or loss to producers.

For 2016, the gross value of all production was \$1,819,489,000; this is a decrease of \$197,957,000 (9.81%) compared to 2015 production. This is mainly due to a decrease in some commodity prices as market prices continue to stabilize. Madera County is ranked 10<sup>th</sup> among the fifty-eight California counties in total agricultural production.

Crop values can vary from year to year due to the variables of production, market and weather conditions. Almonds (nut meats & hulls) retained the top crop rank for the seventh year in a row, with a value of \$593,487,000, but down 25% from 2015. Although there was an increase in bearing almond acreage, the price per ton dropped considerably. Milk overtook grapes for 2<sup>nd</sup> place, with grapes claiming the third spot. Pistachios and Cattle & Calves came in at the 4<sup>th</sup> and 5<sup>th</sup> rankings.

I wish to extend my appreciation to our Madera County farmers, ranchers, agricultural industries and agencies. Without their efforts and contributions of information, this report would not be possible. Additionally, I would like to express my thanks to my staff that contributed to compiling and preparing this report, and especially to Senior Agricultural and Standards Inspector Cha Vang and his dedication to producing the annual report.

To view the 2016 Madera County Agricultural and Livestock Report, and previous reports, please visit our website online at <http://madera-county.com/agcommissioner/cropreports/index.html>.

Respectfully submitted,

Stevie McNeill  
Agricultural Commissioner/Sealer





## MADERA COUNTY STAFF

### Madera County Board of Supervisors

**Brett Frazier...District 1**      **David Rogers...District 2**  
**Robert L. Poythress...District 3**      **Max Rodriguez...Chairman/District 4**  
**Tom Wheeler...District 5**

### County Administrative Officer

**Eric Fleming**

### Agricultural Commissioner/Sealer of Weights & Measures

**Stephanie "Stevie" McNeill**

### Deputy Agricultural Commissioner/Sealer

**Heidi Wong**

### Supervising Agricultural & Standards Inspector

**Page Berquist**      **Gavin Iacono**

### Agricultural & Standards Inspectors

**Judy Cumming**      **Sharon Seslowe**  
**Molly Glover**      **Alison Steen**  
**Jessica Graves**      **Cha Vang**

### Agricultural & Standards Technicians

**Bobby Arias**      **Gabriel Mejia**

### Administrative Support Staff

**Steve Monk, Administrative Analyst II**  
**Tammy Dodson, Program Assistant II**  
**Mary Arias, Program Assistant I**

# TABLE OF CONTENTS

About the Verwey Family Dairy Digester in Madera County	Inside Cover
Letter from the Commissioner	1
County Administration/Ag. Commissioner Staff	2
Table of Contents	3
Ten Leading Crops	4
Madera County's Million Dollar Crops From 1966: 50 Years Ago	4
Field Crops	5
Vegetable Crops	6
Fruit & Nut Crops	7
Forest Products	9
Nursery Products	9
Apiary Products	9
Livestock & Poultry	10
Livestock & Poultry Products	10
Crop Report Summary	11
Madera County Highlights	12
Sustainable Agriculture Report 1	13
Sustainable Agriculture Report 2	14
Countries Receiving Madera County Commodities	15
Madera County Commodities Exported	15
Rainfall - Madera, California (1967-2016)	16

# TEN LEADING CROPS MADERA COUNTY 2016

Commodity	2016 Rank	2016 Dollar Value	2015 Rank
Almonds, Nuts & Hulls	1	\$593,487,000	1
Milk	2	\$271,816,000	3
Grapes	3	\$270,598,000	2
Pistachios	4	\$233,621,000	4
Cattle & Calves	5	\$62,377,000	5
Pollination	6	\$48,006,000	6
Replacement Heifers	7	\$32,400,000	8
Nursery Stock	8	\$29,977,000	10
Tomatoes, Fresh & Process	9	\$28,177,000	9
Oranges	10	\$21,746,000	*

\* not in 2015 top ten

## Madera County's Million Dollar Crops From 1966: 50 Years Ago

CROP	DOLLAR VALUE
CATTLE & CALVES	\$14,700,000
GRAPES	13,394,000
COTTON	8,982,000
ALFALFA HAY	7,911,000
MILK	6,984,000
TURKEYS	5,856,000
PASTURE	3,476,000
CORN, FIELD	1,955,000
PEACHES	1,823,000
POTATOES	1,781,000
BARLEY	1,622,000
BROILERS & FRYERS	1,289,000
TIMBER (BOARD FEET)	69,872,380

# Field Crops

Item	Year	PRODUCTION			VALUE		
		Harvested Acreage	Per Acre	Total	Unit	Per Unit	Total
<b>Alfalfa</b>							
Hay	2016	13,100	7.24	94,844	Ton	\$158.00	\$14,985,000
	2015	16,000	7.11	113,760	Ton	188.00	21,387,000
Silage <sup>a</sup>	2016			21,265	Ton	49.00	1,042,000
	2015			28,120	Ton	53.00	1,490,000
<b>Total</b>	<b>2016</b>	<b>13,100</b>					<b>16,027,000</b>
	2015	16,000					22,877,000
<b>Corn</b>							
Grain	2016	300	4.13	1,239	Ton	181.00	224,000
	2015	300	4.50	1,350	Ton	220.00	297,000
Silage	2016	18,000	25.60	460,800	Ton	39.00	17,971,000
	2015	16,600	26.75	444,050	Ton	53.00	23,535,000
<b>Total</b>	<b>2016</b>	<b>18,300</b>					<b>18,195,000</b>
	2015	16,900					23,832,000
<b>Cotton</b>							
Lint	2016	630	1,634 <sup>b</sup>	2,145	Bale <sup>c</sup>	0.81 <sup>d</sup>	834,000
	2015	700	2,013	2,936	Bale	0.91	1,282,000
Seed	2016			858	Ton	290.00	249,000
	2015			1,174	Ton	296.00	348,000
<b>Total</b>	<b>2016</b>	<b>630</b>					<b>1,083,000</b>
	2015	700					1,630,000
<b>Oat</b>							
Hay	2016	1,800	3.20	5,760	Ton	92.00	530,000
	2015	1,100	3.33	3,663	Ton	132.00	484,000
<b>Pasture</b>							
Irrigated	2016	1,800			Acre	150.00	270,000
	2015	1,300			Acre	150.00	195,000
<b>Rangeland</b>	<b>2016</b>	<b>387,000</b>			<b>Acre</b>	<b>22.00</b>	<b>8,514,000</b>
	2015	390,000			Acre	13.00	5,070,000

a/ Alfalfa acreage yields both hay and silage

b/ Pounds

c/ Bale: 480 pounds

d/ Price per pound

## Field Crops

Item	Year	PRODUCTION			VALUE		
		Harvested Acreage	Per Acre	Total	Unit	Per Unit	Total
<b>Wheat</b>							
Grain	2016	2,000	2.89	5,780	Ton	\$200.00	\$1,156,000
	2015	2,200	4.00	8,800	Ton	220.00	1,936,000
Silage	2016	21,300	13.68	291,384	Ton	31.00	9,033,000
	2015	22,400	13.15	294,560	Ton	43.00	12,666,000
Total	2016	23,300					10,189,000
	2015	24,600					14,602,000
Winter Forage	2016	1,900	9.33	17,727	Ton	29.00	514,000
	2015	1,900	14.32	27,208	Ton	43.00	1,170,000
Miscellaneous <sup>e</sup>	2016	2,400					3,238,000
	2015	3,100					3,710,000
<b>TOTAL</b>	2016	450,230					\$58,560,000
	2015	455,600					73,570,000

e/Includes barley hay, dried beans, oats, sorghum/milo silage, seed crops, sudangrass, wheat hay, field and stubble straw.

## Vegetable Crops

Item	Year	PRODUCTION			VALUE		
		Harvested Acreage	Per Acre	Total	Unit	Per Unit	Total
<b>Tomatoes</b>							
Fresh	2016	500	19.62	9,810	Ton	\$462.00	\$4,532,000
	2015	600	25.19	15,114	Ton	456.00	6,892,000
Processed	2016	5,700	55.31	315,267	Ton	75.00	23,645,000
	2015	7,600	49.68	377,579	Ton	79.00	29,829,000
Total	2016	6,200					28,177,000
	2015	8,200					36,721,000
Miscellaneous <sup>a</sup>	2016	3,700					18,962,000
	2015	2,400					13,816,000
<b>TOTAL</b>	2016	9,900					\$47,139,000
	2015	10,600					50,537,000

a/ Includes artichokes, carrots, all cabbage, garlic, herbs, melons, onions, all peppers, potatoes, all squash and miscellaneous truck crops

# FRUIT & NUT CROPS

Item	Year	PRODUCTION			VALUE		
		Harvested Acreage	Per Acre	Total	Unit	Per Unit	Total
Almonds <sup>a</sup>	2016	125,000	1.02	127,500 <sup>b</sup>	Ton	\$4,498.00	\$573,495,000
	2015	115,000	0.95	109,250	Ton	6,976.00	762,128,000
Almond Hulls	2016			249,900	Ton	80.00	19,992,000
	2015			214,130	Ton	119.00	25,481,000
Cherries	2016	590	3.66	2,159	Ton	3,873.00	8,362,000
	2015	590	5.01	2,956	Ton	4,800.00	14,189,000
Figs, Fresh & Dried	2016	5,600	1.65	9,240	Ton	2,353.00	21,742,000
	2015	5,500	1.93	10,615	Ton	2,290.00	24,308,000
<b>Grapes</b>							
<b>Raisin Varieties</b>							
Crushed	2016	3,400	8.76	29,784	Ton	199.00	5,927,000
	2015	2,600	10.91	28,366	Ton	202.00	5,730,000
Dried	2016	19,200	3.09	59,328	Ton	1,096.00	65,023,000
	2015	20,500	3.05	62,525	Ton	1,484.00	92,787,000
Fresh	2016	800	9.25	7,400	Ton	1,470.00	10,878,000
	2015	900	9.82	8,838	Ton	1,392.00	12,302,000
Table Varieties	2016	3,500	9.13	31,955	Ton	1,790.00	57,199,000
	2015	3,100	9.10	28,210	Ton	1,873.00	52,837,000
<b>Wine Varieties<sup>c</sup></b>							
Red Varieties	2016	23,000	10.78	247,940	Ton	327.00	81,076,000
	2015	23,500	11.32	266,020	Ton	311.00	82,732,000
White Varieties	2016	14,300	11.97	171,171	Ton	295.00	50,495,000
	2015	15,500	11.60	179,800	Ton	289.00	51,962,000
Total Grapes	2016	64,200					270,598,000
	2015	66,100					298,350,000
Olives	2016	820	2.40	1,968	Ton	1,500.00	2,952,000
	Fresh & Oil	2015	740	4.20	3,108	Ton	682.00

a/ Meat basis

b/ Reflects total production, including imperfect stock; price weighted accordingly

c/ Includes table grape crushed

# FRUIT & NUT CROPS

Item	Year	PRODUCTION			VALUE		
		Harvested Acreage	Per Acre	Total	Unit	Per Unit	Total
Oranges	2016	3,000	15.26	45,780	Ton	\$475.00	\$21,746,000
	2015	2,900	15.27	44,283	Ton	469.00	20,769,000
<b>Peaches</b>							
Cling	2016	210	15.73	3,303	Ton	507.00	1,675,000
	2015	280	16.00	4,480	Ton	460.00	2,061,000
Freestone	2016	410	25.99	10,656	Ton	469.00	4,998,000
	2015	320	17.22	5,510	Ton	946.00	5,212,000
Total	2016	620					6,673,000
	2015	600					7,273,000
Pistachios	2016	33,500	1.75	58,625 <sup>b</sup>	Ton	3,985.00	233,621,000
	2015	32,700	0.92	30,084	Ton	5,790.00	174,186,000
Plums, Dried	2016	1,000	3.17	3,170	Ton	2,432.00	7,709,000
	2015	920	1.88	1,730	Ton	2,139.00	3,700,000
Walnuts	2016	2,000	1.74	3,480	Ton	1,778.00	6,187,000
	2015	1,900	1.70	3,221	Ton	1,822.00	5,869,000
<b>Miscellaneous</b>							
Fruits & Nuts <sup>d</sup>	2016	7,500					71,461,000
	2015	8,300					63,658,000
Orchard	2016			6,000	Cord <sup>e</sup>		1,110,000
Firewood	2015			5,500	Cord		908,000
<b>TOTAL</b>	2016	<b>243,830</b>					<b>\$1,245,648,000</b>
	2015	235,250					1,402,939,000

d/ Includes apples, apricots, berries, kiwis, nectarines, pears, pecans, persimmons, plums, pomegranates, tangelos, tangerines, almond and walnut shells

e/ Cord: 128 Cubic feet

## APIARY PRODUCTS

Item	Year	PRODUCTION		VALUE	
		Total	Unit	Per Unit	Total
<b>Apiary Products</b>					
Beeswax	2016	44,133	Pound	\$3.40	\$150,000
	2015	82,773	Pound	3.40	281,000
Honey	2016	555,020	Pound	1.85	1,027,000
	2015	712,271	Pound	2.20	1,567,000
Pollination	2016	254,000	Colony	189.00	48,006,000
	2015	234,000	Colony	191.00	44,694,000
<b>TOTAL</b>	2016				<b>\$49,183,000</b>
	2015				46,542,000

## FOREST PRODUCTS

Item	Year	PRODUCTION		VALUE	
		Production	Unit		Total
Timber	2016	4,400	MBF <sup>a</sup>		\$396,000
	2015	8,071	MBF		721,000
Firewood <sup>b</sup>	2016	6,700	Cord <sup>c</sup>		452,000
	2015	5,800	Cord		334,000
<b>TOTAL</b>	2016				<b>\$848,000</b>
	2015				1,055,000

a/ MBF: Thousand board feet

b/ Includes: Christmas trees, greenery, pinecones and saw logs

c/ Cord: 128 Cubic feet

## NURSERY PRODUCTS

Item	Year	PRODUCTION		VALUE	
		Field Acres	House Sq. Foot		Total
Nursery Stock <sup>a</sup>	2016	350	257,000		\$29,977,000
	2015	270	229,000		26,725,000

a/ Includes grapevines, fruit trees, nut trees and ornamentals



# LIVESTOCK AND POULTRY

## PRODUCTION

## VALUE

Item	Year	Head	Liveweight	Unit	Per	Unit	Total
Cattles and Calves <sup>a</sup>	2016	76,000	547,170	CWT <sup>b</sup>		\$114.00	\$62,377,000
	2015	76,200	547,980	CWT		133.00	72,881,000
Replacement Heifers <sup>c</sup>	2016	27,000				1,200.00	32,400,000
	2015	27,300				1,380.00	37,674,000
Poultry	2016	3,431,000					14,141,000
	2015	8,406,000					43,466,000
TOTAL	2016						\$108,918,000
	2015						154,021,000

a/ Range and dairy cattle sold for beef

b/ Hundredweight: 100 pounds

c/ Milk cows

# LIVESTOCK AND POULTRY PRODUCTS

## PRODUCTION

## VALUE

Item	Year	Production	Unit	Per	Unit	Total
Milk Market <sup>a</sup>	2016	18,195,884	CWT		\$14.92	\$271,483,000
	2015	18,361,444	CWT		13.86	254,490,000
Milk Manufacturing <sup>a</sup>	2016	21,906	CWT		15.20	333,000
	2015	29,378	CWT		17.22	506,000
Other Products <sup>b</sup>	2016					7,400,000
	2015					7,061,000
TOTAL	2016					\$279,216,000
	2015					262,057,000

a/ Madera County has 42 dairies, with 70,000 lactating cows

b/ Includes: aquaculture, market eggs, hogs, manure, sheep, lambs and wool

# AGRICULTURAL CROP REPORT SUMMARY

## MADERA COUNTY 2016

Item	Year	Harvested Acres	Total Value
Apiary	2016		\$49,183,000
	2015		46,542,000
Field Crops	2016	450,230	58,560,000
	2015	455,600	73,570,000
Fruit and Nut Crops	2016	243,830	1,245,648,000
	2015	235,250	1,402,939,000
Forest Products	2016		848,000
	2015		1,055,000
Livestock and Poultry	2016		108,918,000
	2015		154,021,000
Livestock and Poultry Products	2016		279,216,000
	2015		262,057,000
Nursery Products	2016	350	29,977,000
	2015	270	26,725,000
Vegetable Crops	2016	9,900	47,139,000
	2015	10,600	50,537,000
<b>TOTAL</b>	2016		<b>\$1,819,489,000</b>
	2015		2,017,446,000

**MADERA COUNTY  
HIGHLIGHTS**

County Established	March 11, 1893
County Seat	Madera (city)
Population <sup>a</sup>	154,697

<b>Total County Acreage</b>	1,366,925
2016 Harvested Acreage	707,310
Field Crop Acreage	63,230
Fruit and Nut Acreage	243,830
Nursery Acreage	350
Rangeland Acreage	390,000
Vegetable Acreage	9,900
Forest Acreage	414,300
U. S. Parkland Acreage	83,000

**Bordering Counties**

Merced County	Northwest
Mariposa County	North
Mono County	East
Fresno County	South and West

**Ranking of Madera County Among Counties of California**

Population <sup>a</sup>	32
Total Acreage	24
Total Agricultural Production <sup>b</sup>	10
Commodity, by Value	
Figs	1
Pistachios	3
Grapes, Raisin Variety	4
Almonds	4
Grapes, Table Variety	5
Cattles & Calves	6
Grapes, Wine Variety	7
Corn, Silage	7
Cherries	7
Milk, Market	8

**Ranking of Madera County Among Counties of the United States**

Total Agricultural Production <sup>c</sup>	14
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- a/ US Bureau of Census, 2015 Estimate
- b/ County Agricultural Commissioner's Data, 2015
- c/ USDA Ag Census, 2012

Madera County Crop Reports from 2001 to 2016 are available at:  
<http://www.madera-county.com/index.php/publications/crop-reports>

# 2016 Sustainable Agriculture Report 1

## Pest Prevention

Pest prevention programs are mandated by the California Food and Agricultural Code to prevent the introduction and spread of pests in California. Pest prevention involves three strata: pest exclusion, pest detection and integrated pest management.

The **Pest Exclusion Program** prevents the introduction of injurious pests that are not of common occurrence in the county.

Over 290 beehive shipments received from Red Imported Fire Ants (RIFA) infested states, with over 118,000 beehives, were inspected for RIFA.

Countries receiving agricultural commodities require certification that the commodities are free from potentially injurious pests. Over 5,000 phytosanitary inspections were performed on Madera County commodities, which were exported to 67 countries.

The State of California's **Pest Detection Program** utilizes insect traps and surveys for the detection of foreign pests which may have eluded exclusion efforts. The trapping program targeted multiple pests, including the following:

Caribbean Fruit Fly ( <i>Anastrepha suspens</i> )	European Corn Borer ( <i>Ostrinia nubilalis</i> )
Gypsy Moth ( <i>Lymentria dispar</i> )	Japanese Beetle ( <i>Popillia japonica</i> )
Light Brown Apple Moth ( <i>Epiphyas postvittana</i> )	Mediterranean Fruit Fly ( <i>Ceratitis capitata</i> )
Melon Fruit Fly ( <i>Dacus cucurbitae</i> )	Mexican Fruit Fly ( <i>Anastrepha ludens</i> )
Oriental Fruit Fly ( <i>Bactrocera dorsalis</i> )	

The **Integrated Pest Control Program** strives to eradicate infestations of new pests before they become widespread. Pink Bollworm (*Pectinophora gossypiella*) a non-established and economically significant pest of cotton, is controlled by post-season plowdown of cotton plants. Pink Bollworm was controlled by post-season plowdown of over 630 acres of cotton plantings.

# 2016 Sustainable Agriculture Report 2

## Pest Management

The Glassy-winged Sharpshooter Program serves to detect and control the vector of Pierce's Disease, a potentially catastrophic disease of vineyards. This program involved the placement of traps in both urban and agricultural sites followed by subsequent trap servicings. In addition, incoming shipments of host material and susceptible county plantings were inspected.

Multiple Glassy-winged Sharpshooters were found in Madera County in 2016, which lead to additional placement of delimitation traps also followed by subsequent trap servicings.

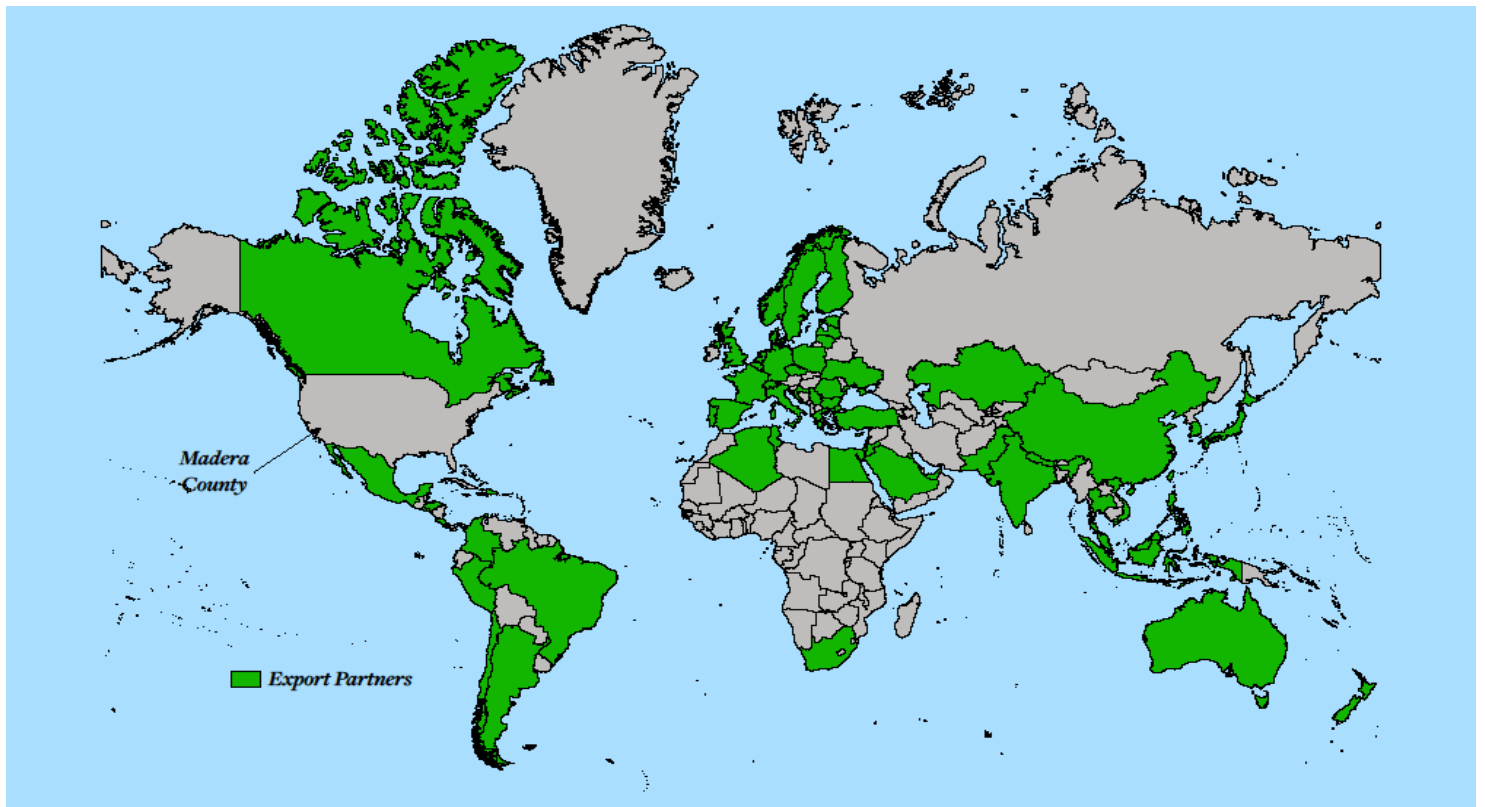
Additionally, the California Department of Food and Agriculture (CDFA) released three parasitic wasps (*Gonatocerus triguttatus*, *G. morgani* and *G. morrilli*) in 2016 to aid in the control of the Glassy-winged Sharpshooters. Over four hundred parasitoids were released in the Wildwood and Rolling Hills areas.

## Organic Farming

Sixty-three organic farms and 9 handlers were registered in Madera County in 2016. Utilizing organic principles defined in the California Organic Products Act of 2003, these farms produce a wide array of commodities, such as:

*alfalfa, almonds, apples, apricots, artichokes, basil, dried beans, green beans, beets, berries, broccoli, cabbage, cantaloupe, carrots, cauliflower, chard, cherries, cilantro, collards greens, coriander, sweet corn, cucumbers, daikon, dill, fennel, figs, garlic, gourds, grapes (table, raisin, wine), grapefruit, hay, herbs, kale, kiwifruit, kohlrabi, leeks, lemons, lettuce, livestock, mustard greens, oats, okra, olives, onions, oranges, parsley, pasture, peas, peppers, persimmons, pistachio, plums, pomegranates, popcorn, potatoes, poultry, prunes, pumpkins, radish, rutabagas, seed crops, spinach, squash, tomatillos, tomatoes, turnips, walnuts, watermelons, and wheat.*

The value of organic production in Madera County in 2016 was **\$43,119,000**.



**67 Countries Received Madera County Commodities in 2016:**

Algeria	Egypt	Kuwait	Romania
Argentina	El Salvador	Latvia	Saudi Arabia
Australia	Estonia	Lebanon	Serbia
Bahrain	Finland	Lithuania	Singapore
Belgium	France	Malaysia	South Africa
Brazil	Germany	Mauritius	Spain
Bulgaria	Greece	Mexico	Sweden
Canada	Honduras	Nepal	Switzerland
Chile	Hong Kong	Netherlands	Taiwan
China	India	New Caledonia	Thailand
Colombia	Indonesia	New Zealand	Tunisia
Costa Rica	Israel	Norway	Turkey
Croatia	Italy	Pakistan	Ukraine
Cyprus	Japan	Peru	United Arab Emirates
Czech Republic	Jordan	Philippines	United Kingdom
Denmark	Kazakhstan	Poland	Viet Nam
Dominican Republic	Korea, Republic of	Portugal	

**Madera County Commodities Exported:**

- |            |                    |                      |
|------------|--------------------|----------------------|
| *Almonds   | *Masa (Corn Flour) | *Raisins             |
| *Figs      | *Pistachios        | *Tillandsia (Plants) |
| *Grapes    | *Plums             | *Walnuts             |
| *Kiwifruit | *Prunes            |                      |

**RAINFALL - MADERA, CALIFORNIA (1967 - 2016)**

<b>YEAR</b>	<b>JUL</b>	<b>AUG</b>	<b>SEPT</b>	<b>OCT</b>	<b>NOV</b>	<b>DEC</b>	<b>JAN</b>	<b>FEB</b>	<b>MAR</b>	<b>APR</b>	<b>MAY</b>	<b>JUNE</b>	<b>TOTAL</b>
1967-68	0.00	0.00	0.10	0.02	1.37	1.45	0.84	1.57	1.58	1.02	0.31	0.00	8.26
1968-69	0.00	0.03	0.00	1.22	2.26	3.24	5.69	4.37	1.60	1.74	0.02	0.00	20.17
1969-70	0.07	0.00	0.13	0.52	1.01	1.45	3.42	0.84	2.09	0.21	0.00	0.19	9.93
1970-71	0.00	0.00	0.00	0.24	1.97	2.85	0.45	0.22	1.01	0.83	1.77	0.00	9.34
1971-72	0.00	0.00	0.02	0.04	0.58	1.72	0.19	0.70	0.00	0.56	0.03	0.05	3.89
1972-73	0.02	0.00	0.14	0.49	4.07	1.40	2.23	3.71	2.98	0.39	0.00	0.02	15.45
1973-74	0.00	0.00	0.00	1.55	1.15	2.36	2.26	0.42	2.32	0.72	0.00	0.00	10.78
1974-75	0.00	0.00	0.00	1.10	0.52	1.54	0.43	1.56	2.17	1.81	0.00	0.00	9.13
1975-76	0.00	0.15	0.19	1.26	0.34	0.10	0.10	3.64	0.64	1.60	0.00	0.00	8.02
1976-77	0.05	0.27	0.94	0.66	0.87	1.18	0.60	0.22	1.05	0.00	0.77	0.00	6.61
1977-78	0.00	0.00	0.00	0.00	0.58	2.36	3.14	4.27	5.04	2.90	0.00	0.00	18.29
1978-79	0.02	0.00	1.61	0.03	3.04	0.54	3.97	3.18	2.14	0.11	0.12	0.00	14.76
1979-80	0.00	0.00	0.00	0.66	1.00	1.50	3.61	3.81	1.50	0.63	0.25	0.00	12.96
1980-81	0.00	0.00	0.00	0.12	0.26	0.58	2.74	0.76	3.42	1.03	0.00	0.00	8.91
1981-82	0.00	0.00	0.00	1.36	1.99	0.81	1.97	1.42	3.44	2.94	0.00	0.20	14.13
1982-83	0.00	0.00	0.84	1.29	3.16	1.78	4.97	3.40	5.12	1.90	0.83	0.00	23.29
1983-84	0.00	0.00	0.22	0.66	2.58	2.45	0.35	1.48	0.59	0.18	0.00	0.00	8.51
1984-85	0.00	0.00	0.00	0.87	2.37	2.12	0.59	0.71	1.65	0.52	0.00	0.34	9.17
1985-86	0.00	0.12	0.11	0.54	2.76	1.03	1.37	5.22	3.16	0.51	0.15	0.00	14.97
1986-87	0.00	0.00	0.43	0.00	0.00	0.97	1.60	2.26	2.91	0.36	0.03	0.02	8.58
1987-88	0.00	0.00	0.00	1.96	0.48	1.52	0.90	0.50	0.59	2.03	0.29	0.03	8.30
1988-89	0.00	0.00	0.00	0.00	1.42	2.04	0.40	1.20	2.13	0.17	0.11	0.00	7.47
1989-90	0.00	0.03	0.94	0.55	0.54	0.00	2.32	1.38	0.71	1.41	2.36	0.00	10.24
1990-91	0.00	0.00	0.04	0.03	0.53	0.64	0.15	1.25	7.11	0.17	0.05	0.01	9.98
1991-92	0.00	0.02	0.00	0.87	0.23	1.08	1.43	2.88	2.13	0.02	0.00	0.00	8.66
1992-93	0.09	0.00	0.00	1.33	0.04	3.08	5.16	2.69	2.92	0.32	0.71	0.43	16.77
1993-94	0.00	0.00	0.00	0.06	0.77	1.39	1.85	1.77	0.43	1.89	2.61	0.00	10.77
1994-95	0.00	0.00	0.13	1.41	1.61	1.36	5.18	0.71	4.82	1.21	0.79	0.48	17.70
1995-96	0.00	0.00	0.00	0.00	0.00	2.42	2.62	3.98	2.34	0.84	0.52	0.32	13.04
1996-97	0.00	0.00	0.00	1.83	2.55	5.02	5.05	0.19	0.00	0.00	0.00	0.00	14.64
1997-98	0.00	0.01	0.13	0.00	2.55	1.65	4.22	5.69	4.26	2.03	1.38	0.74	22.66
1998-99	0.00	0.00	0.88	0.19	0.34	0.95	2.18	1.67	0.63	1.62	0.06	0.05	8.57
1999-00	0.00	0.00	0.00	0.00	0.61	0.08	3.59	6.13	1.35	1.26	0.16	0.46	13.64
2000-01	0.00	0.00	0.27	2.82	0.07	0.13	2.33	1.98	1.71	1.08	0.00	0.00	10.39
2001-02	0.02	0.00	0.02	0.51	1.89	2.42	1.40	0.34	1.14	0.23	0.33	0.22	8.52
2002-03	0.00	0.00	0.00	0.00	2.80	2.85	0.51	1.51	0.64	1.74	0.87	0.00	10.92
2003-04	0.00	0.06	0.00	0.00	0.34	2.88	0.95	2.20	0.56	0.00	0.00	0.00	6.99
2004-05	0.00	0.00	0.00	3.89	1.07	3.67	2.10	3.04	2.59	0.60	3.32	0.00	20.28
2005-06	0.00	0.04	0.01	0.00	0.00	2.49	3.10	0.65	3.80	2.55	0.00	0.00	12.64
2006-07	0.00	0.00	0.00	0.40	0.56	1.40	0.65	1.86	0.57	0.35	0.05	0.00	5.84
2007-08	0.00	0.00	0.15	0.32	0.09	2.13	2.78	2.21	0.00	0.00	0.26	0.00	7.94
2008-09	0.00	0.00	0.00	0.00	1.19	1.27	1.95	3.24	0.83	0.00	0.00	0.00	8.48
2009-10	0.00	0.00	0.06	1.14	0.17	2.69	2.48	2.77	2.04	2.69	0.22	0.00	14.26
2010-11	0.00	0.00	0.00	0.21	2.31	5.40	1.88	1.50	4.17	0.24	0.45	1.41	17.57
2011-12	0.00	0.00	0.00	0.72	0.89	0.08	0.89	0.46	2.92	2.61	0.00	0.12	8.69
2012-13	0.00	0.00	0.00	0.07	1.84	3.42	1.33	0.74	0.12	0.98	0.06	0.00	8.56
2013-14	0.00	0.00	0.02	0.07	0.25	0.23	0.32	2.16	0.48	1.11	0.00	0.00	4.64
2014-15	0.00	0.00	0.04	0.00	1.06	2.41	0.00	0.66	0.01	0.94	0.45	0.00	5.57
2015-16	0.02	0.00	0.14	0.29	1.81	2.24	4.14	0.46	3.84	3.14	0.01	0.02	16.11
2016-17	0.00	0.00	0.00	0.77	1.42	2.22	4.98	3.88	0.60	0.45	0.12	0.00	14.44
<b>Average</b>	<b>0.01</b>	<b>0.01</b>	<b>0.15</b>	<b>0.64</b>	<b>1.23</b>	<b>1.81</b>	<b>2.15</b>	<b>2.07</b>	<b>2.00</b>	<b>1.03</b>	<b>0.39</b>	<b>0.10</b>	<b>11.59</b>

**50 YEAR AVERAGE RAINFALL**



Department of Agriculture / Weights & Measures

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[www.madera-county.com/index.php/department-of-ag-home](http://www.madera-county.com/index.php/department-of-ag-home)



# 2017 CROP & LIVESTOCK REPORT



**MADERA COUNTY**



## MADERA COUNTY STAFF

### Madera County Board of Supervisors

**Brett Frazier...District 1**      **David Rogers...District 2**  
**Robert L. Poythress...District 3**      **Max Rodriguez...District 4**  
**Tom Wheeler...Chairman, District 5**

### County Administrative Officer

**Eric Fleming**

### Agricultural Commissioner/Sealer of Weights & Measures

**Stephanie "Stevie" McNeill**

### Deputy Agricultural Commissioner/Sealer

**Heidi Wong**

### Supervising Agricultural & Standards Inspector

**Page Berquist**      **Bill Griffin**

### Agricultural & Standards Inspectors

**Judy Cumming**      **Jessica Graves**

**Molly Glover**      **Alison Steen**

**Cha Vang**

### Agricultural & Standards Technicians

**Bobby Arias**      **Gabriel Mejia**

### Administrative Support Staff

**Steve Monk, Administrative Analyst II**

**Tammy Dodson, Program Assistant II**

**Mary Arias, Program Assistant I**



# Madera County Department of Agriculture Weights and Measures

Stephanie "Stevie" McNeill, Agricultural Commissioner  
Sealer of Weights and Measures

Karen Ross, Secretary  
California Department of Food and Agriculture

and

The Honorable Board of Supervisors  
County of Madera, California

Tom Wheeler Chairman, District 5  
Brett Frazier District 1  
David Rogers District 2  
Robert Poythress District 3  
Max Rodriguez District 4

It is my pleasure to present the 2017 Madera County Agricultural Crop and Livestock Report. This annual statistical report is compiled in accordance with Sections 2271 and 2279 of the California Food and Agricultural Code, and contains data on the acreage, yield, and values of Madera County Agricultural commodities. The values in this report are gross values, and do not represent net income or loss to producers.

For 2017, the gross value of all production was \$1,973,449,000; this is an increase of \$153,960,000 (8.46%) compared to 2016 production. This is a sign of market prices continuing to stabilize in the past two years. Madera County is ranked 11<sup>th</sup> among the fifty-eight California counties in total agricultural production.

Crop values can vary from year to year due to the variables of production, market and weather conditions. Almonds (nut meats & hulls) retained the number 1 rank of the ten leading crops for the eighth year in a row, with a value of \$723,518,000, a 21.9% increase from 2016. This reflects an increase in bearing acreage, yields and price per ton. Milk retained the second place, with grapes claiming the third spot. Pistachios and Cattle & Calves came in at the 4<sup>th</sup> and 5<sup>th</sup> rankings.

I wish to extend my appreciation to our Madera County farmers, ranchers, agricultural industries and agencies. Without their efforts and contributions of information, this report would not be possible. Additionally, I would like to express my thanks to my staff that contributed to compiling and preparing this report, and especially to Senior Agricultural and Standards Inspector Cha Vang and his dedication to producing the annual report.

To view the 2017 Madera County Agricultural and Livestock Report, and previous reports, please visit our website online at <https://www.maderacounty.com/government/agricultural-commissioner-weights-and-measures/annual-crop-reports>

Respectfully submitted,

Stevie McNeill  
Agricultural Commissioner/Sealer

# TABLE OF CONTENTS

County Administration/Ag. Commissioner Staff	Inside Cover
Letter from the Commissioner	1
Table of Contents	2
Ten Leading Crops	3
Madera County's 1967 Million Dollar Crops: 50 Years Ago	3
Field Crops	4
Vegetable Crops	5
Fruit & Nut Crops	6
Forest Products	8
Nursery Products	8
Apiary Products	8
Livestock & Poultry	9
Livestock & Poultry Products	9
Agricultural Crop Report Summary	10
Madera County Highlights	11
Sustainable Agriculture Report 1	12
Sustainable Agriculture Report 2	13
Countries Receiving Madera County Commodities	14
Madera County Commodities Exported	14
Rainfall - Madera, California (1968-2017)	Inside Back Cover

# TEN LEADING CROPS

## MADERA COUNTY 2017

Commodity	2017 Rank	2017 Dollar Value	2016 Rank
Almonds, Nuts & Hulls	1	\$723,518,000	1
Milk	2	\$306,228,000	2
Grapes	3	\$291,971,000	3
Pistachios	4	\$194,260,000	4
Cattle & Calves	5	\$63,176,000	5
Pollination	6	\$54,795,000	6
Replacement Heifers	7	\$35,500,000	7
Nursery Stock	8	\$29,382,000	8
Tomatoes, Fresh & Process	9	\$29,035,000	9
Poultry	10	\$24,259,000	*

\* not in 2016 top ten

### Madera County's 1967 Million Dollar Crops: 50 Years Ago

"MILLION DOLLAR CROPS"	
1967	
Grapes	\$ 14,401,000
Cotton	12,573,000
Cattle & Calves	12,375,000
Alfalfa	7,924,000
Milk	7,259,000
Turkeys	5,682,000
Pasture	3,495,000
Barley	1,863,000
Peaches	1,830,000
Potatoes	1,450,000
Corn	1,400,000
Broilers & Fryers	1,303,000
Sorghum Grain	1,008,000

TIMBER CUT IN MADERA COUNTY				
VARIETY	YEAR	GOVERNMENT LAND	PRIVATE LAND	TOTAL M.B.F.
Ponderosa & Jeffrey Pine	1967	15,353	xx	15,353
Sugar Pine	1967	11,510	xx	11,510
Red & White Fir	1967	25,333	723	26,056
Incense Cedar	1967	1,376	xx	1,376
Lodgepole Pine	1967	333	xx	333
Miscellaneous*	1967	1,032	870	1,902
TOTALS	1967	54,937	1,593	56,530

\*Miscellaneous includes salvage of all species.  
The known amount of timber cut in Madera County is included as an item of interest, as it contributes much to the economy of our county.

# FIELD CROPS

Item	Year	PRODUCTION			VALUE		
		Harvested Acreage	Per Acre	Total	Unit	Per Unit	Total
<b>Alfalfa</b>							
Hay	2017	11,700	7.18	84,006	Ton	\$186.00	\$15,625,000
	2016	13,100	7.24	94,844	Ton	158.00	14,985,000
Silage <sup>a</sup>	2017			11,600	Ton	45.00	522,000
	2016			21,265	Ton	49.00	1,042,000
Total	2017	11,700					16,147,000
	2016	13,100					16,027,000
<b>Corn</b>							
Grain	2017	300	5.62	1,686	Ton	260.00	438,000
	2016	300	4.13	1,239	Ton	181.00	224,000
Silage	2017	18,400	28.13	517,592	Ton	41.00	21,221,000
	2016	18,000	25.60	460,800	Ton	39.00	17,971,000
Total	2017	18,700					21,659,000
	2016	18,300					18,195,000
<b>Cotton</b>							
Lint	2017	860	1,496 <sup>b</sup>	2,680	Bale <sup>c</sup>	1.03 <sup>d</sup>	1,325,000
	2016	630	1,634	2,145	Bale	0.81	834,000
Seed	2017			1,072	Ton	285.00	306,000
	2016			858	Ton	290.00	249,000
Total	2017	860					1,631,000
	2016	630					1,083,000
<b>Oat</b>							
Hay	2017	2,000	3.91	7,820	Ton	110.00	860,000
	2016	1,800	3.20	5,760	Ton	92.00	530,000
<b>Pasture</b>							
Irrigated	2017	1,300			Acre	150.00	195,000
	2016	1,800			Acre	150.00	270,000
Rangeland	2017	387,000			Acre	21.00	8,127,000
	2016	387,000			Acre	22.00	8,514,000

a/ Alfalfa acreage yields both hay and silage

b/ Pounds

c/ Bale: 480 pounds

d/ Price per pound

## FIELD CROPS

Item	Year	PRODUCTION			VALUE		
		Harvested Acreage	Per Acre	Total	Unit	Per Unit	Total
<b>Wheat</b>							
Grain	2017	3,600	2.84	10,224	Ton	\$197.00	\$2,014,000
	2016	2,000	2.89	5,780	Ton	200.00	1,156,000
Silage	2017	20,600	15.18	312,708	Ton	30.00	9,381,000
	2016	21,300	13.68	291,384	Ton	31.00	9,033,000
Total	2017	24,200					11,395,000
	2016	23,300					10,189,000
Winter Forage	2017	1,700	10.96	18,632	Ton	31.00	578,000
	2016	1,900	9.33	17,727	Ton	29.00	514,000
Miscellaneous <sup>e</sup>	2017	5,900					4,981,000
	2016	2,400					3,238,000
<b>TOTAL</b>	2017	453,360					\$65,573,000
	2016	450,230					58,560,000

e/ Includes corn nuts, oats, sorghum/milo silage, seed crops, sudangrass, wheat hay, field and stubble straw.

## VEGETABLE CROPS

Item	Year	PRODUCTION			VALUE		
		Harvested Acreage	Per Acre	Total	Unit	Per Unit	Total
<b>Tomatoes</b>							
Fresh	2017	700	20.34	14,238	Ton	\$466.00	\$6,635,000
	2016	500	19.62	9,810	Ton	462.00	4,532,000
Processed	2017	5,900	52.73	311,107	Ton	72.00	22,400,000
	2016	5,700	55.31	315,267	Ton	75.00	23,645,000
Total	2017	6,600					29,035,000
	2016	6,200					28,177,000
Miscellaneous <sup>a</sup>	2017	4,100					19,287,000
	2016	3,700					18,962,000
<b>TOTAL</b>	2017	10,700					\$48,322,000
	2016	9,900					47,139,000

a/ Includes artichokes, carrots, all cabbage, garlic, herbs, melons, onions, all peppers, potatoes, all squash and miscellaneous truck crops

# FRUIT & NUT CROPS

Item	Year	PRODUCTION			VALUE		
		Harvested Acreage	Per Acre	Total	Unit	Per Unit	Total
Almonds <sup>a</sup>	2017	135,000	1.11	149,850 <sup>b</sup>	Ton	\$4,695.00	\$703,546,000
	2016	125,000	1.02	127,500	Ton	4,498.00	573,495,000
Almond Hulls	2017			293,706	Ton	68.00	19,972,000
	2016			249,900	Ton	80.00	19,992,000
Cherries	2017	590	3.42	2,018	Ton	4,320.00	8,718,000
	2016	590	3.66	2,159	Ton	3,873.00	8,362,000
Figs, Fresh & Dried	2017	5,400	1.48	7,992	Ton	2,064.00	16,495,000
	2016	5,600	1.65	9,240	Ton	2,353.00	21,742,000
<b>Grapes</b>							
<b>Raisin Varieties</b>							
Crushed	2017	3,800	7.96	30,248	Ton	242.00	7,320,000
	2016	3,400	8.76	29,784	Ton	199.00	5,927,000
Dried	2017	18,000	2.96	53,280	Ton	1,761.00	93,826,000
	2016	19,200	3.09	59,328	Ton	1,096.00	65,023,000
Fresh	2017	730	6.92	5,052	Ton	1,481.00	7,482,000
	2016	800	9.25	7,400	Ton	1,470.00	10,878,000
Table Varieties	2017	3,400	9.45	32,130	Ton	1,996.00	64,131,000
	2016	3,500	9.13	31,955	Ton	1,790.00	57,199,000
<b>Wine Varieties<sup>c</sup></b>							
Red Varieties	2017	22,500	10.02	225,450	Ton	308.00	69,439,000
	2016	23,000	10.78	247,940	Ton	327.00	81,076,000
White Varieties	2017	14,300	11.68	167,024	Ton	298.00	49,773,000
	2016	14,300	11.97	171,171	Ton	295.00	50,495,000
Total Grapes	2017	62,730					291,971,000
	2016	64,200					270,598,000
Olives	2017	820	3.12	2,558	Ton	1,009.00	2,581,000
	Fresh & Oil 2016	820	2.40	1,968	Ton	1,500.00	2,952,000

a/ Meat basis

b/ Reflects total production, including imperfect stock; price weighted accordingly

c/ Includes table grape crushed



# FRUIT & NUT CROPS

Item	Year	PRODUCTION			VALUE		
		Harvested Acreage	Per Acre	Total	Unit	Per Unit	Total
Oranges	2017	3,000	15.37	46,110	Ton	\$460.00	\$21,211,000
	2016	3,000	15.26	45,780	Ton	475.00	21,746,000
<b>Peaches</b>							
Cling	2017	260	18.00	4,680	Ton	450.00	2,106,000
	2016	210	15.73	3,303	Ton	507.00	1,675,000
Freestone	2017	490	21.81	10,687	Ton	427.00	4,563,000
	2016	410	25.99	10,656	Ton	469.00	4,998,000
Total	2017	750					6,669,000
	2016	620					6,673,000
Pistachios	2017	34,500	1.28	44,160 <sup>b</sup>	Ton	4,399.00	194,260,000
	2016	33,500	1.75	58,625	Ton	3,985.00	233,621,000
Plums, Dried	2017	1,100	2.61	2,871	Ton	2,067.00	5,934,000
	2016	1,000	3.17	3,170	Ton	2,432.00	7,709,000
Walnuts	2017	2,100	1.33	2,793	Ton	2,500.00	6,983,000
	2016	2,000	1.74	3,480	Ton	1,778.00	6,187,000
<b>Miscellaneous</b>							
Fruits & Nuts <sup>d</sup>	2017	7,000					53,998,000
	2016	7,500					71,461,000
Orchard	2017			5,500	Cord <sup>e</sup>		1,045,000
Firewood	2016			6,000	Cord		1,110,000
<b>TOTAL</b>	2017	<b>252,990</b>					<b>\$1,333,383,000</b>
	2016	<b>243,830</b>					<b>1,245,648,000</b>

d/ Includes apples, apricots, berries, kiwifruit, nectarines, pears, pecans, persimmons, plums, pomegranates, tangelos, tangerines, almond and walnut shells

e/ Cord: 128 Cubic feet

## APIARY PRODUCTS

Item	Year	PRODUCTION		VALUE	
		Total	Unit	Per Unit	Total
<b>Apiary Products</b>					
Beeswax	2017	54,000	Pound	\$3.00	\$162,000
	2016	44,133	Pound	3.40	150,000
Honey	2017	568,246	Pound	2.09	1,188,000
	2016	555,020	Pound	1.85	1,027,000
Pollination	2017	281,000	Colony	195.00	54,795,000
	2016	254,000	Colony	189.00	48,006,000
<b>TOTAL</b>	2017				<b>\$56,145,000</b>
	2016				<b>49,183,000</b>

## FOREST PRODUCTS

Item	Year	PRODUCTION		VALUE	
		Production	Unit		Total
Timber	2017	3,100	MBF <sup>a</sup>		\$382,000
	2016	4,400	MBF		396,000
Firewood <sup>b</sup>	2017	8,200	Cord <sup>c</sup>		772,000
	2016	6,700	Cord		452,000
<b>TOTAL</b>	2017				<b>\$1,154,000</b>
	2016				<b>848,000</b>

a/ MBF: Thousand board feet

b/ Includes: Christmas trees, greenery, pinecones and saw logs

c/ Cord: 128 Cubic feet

## NURSERY PRODUCTS

Item	Year	PRODUCTION		VALUE	
		Field Acres	House Sq. Foot		Total
Nursery Stock <sup>a</sup>	2017	350	271,000		\$29,382,000
	2016	350	257,000		29,977,000

a/ Includes grapevines, fruit trees, nut trees and ornamentals

## LIVESTOCK AND POULTRY

Item	Year	PRODUCTION			VALUE	
		Head	Liveweight	Unit	Per Unit	Total
Cattles and Calves <sup>a</sup>	2017	79,400	596,000	CWT <sup>b</sup>	\$106.00	\$63,176,000
	2016	76,000	547,170	CWT	114.00	62,377,000
Replacement Heifers <sup>c</sup>	2017	28,400			1,250.00	35,500,000
	2016	27,000			1,200.00	32,400,000
Poultry	2017	3,261,000				24,259,000
	2016	3,431,000				14,141,000
<b>TOTAL</b>	2017					<b>\$122,935,000</b>
	2016					108,918,000

a/ Range and dairy cattle sold for beef

b/ Hundredweight: 100 pounds

c/ Milk cows

## LIVESTOCK AND POULTRY PRODUCTS

Item	Year	PRODUCTION		VALUE	
		Production	Unit	Per Unit	Total
Milk Market <sup>a</sup>	2017	18,521,180	CWT	\$16.47	\$305,045,000
	2016	18,195,884	CWT	14.92	271,483,000
Milk Manufacturing <sup>a</sup>	2017	64,182	CWT	18.25	1,183,000
	2016	21,906	CWT	15.20	333,000
Other Products <sup>b</sup>	2017				10,327,000
	2016				7,400,000
<b>TOTAL</b>	2017				<b>\$316,555,000</b>
	2016				279,216,000

a/ Madera County has 37 dairies, with 81,000 lactating cows

b/ Includes: aquaculture, market eggs, hogs, manure, sheep, lambs and wool

# AGRICULTURAL CROP REPORT SUMMARY 2017

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Item	Year	Harvested Acres	Total Value
Apiary	2017		\$56,145,000
	2016		49,183,000
Field Crops	2017	453,360	65,573,000
	2016	450,230	58,560,000
Fruit and Nut Crops	2017	252,990	1,333,383,000
	2016	243,830	1,245,648,000
Forest Products	2017		1,154,000
	2016		848,000
Livestock and Poultry	2017		122,935,000
	2016		108,918,000
Livestock and Poultry Products	2017		316,555,000
	2016		279,216,000
Nursery Products	2017	350	29,382,000
	2016	350	29,977,000
Vegetable Crops	2017	10,700	48,322,000
	2016	9,900	47,139,000
<b>TOTAL</b>	2017		<b>\$1,973,449,000</b>
	2016		<b>1,819,489,000</b>

## MADERA COUNTY

### HIGHLIGHTS

County Established	March 11, 1893
County Seat	Madera (city)
Population <sup>a</sup>	156,890
<b>Total County Acreage</b>	<b>1,366,925</b>
2017 Harvested Acreage	717,400
Field Crop Acreage	66,360
Fruit and Nut Acreage	252,990
Nursery Acreage	350
Rangeland Acreage	387,000
Vegetable Acreage	10,700
Forest Acreage	414,300
U. S. Parkland Acreage	83,000
<b>Bordering Counties</b>	
Merced County	Northwest
Mariposa County	North
Mono County	East
Fresno County	South and West
<b>Ranking of Madera County Among Counties of California</b>	
Population <sup>a</sup>	32
Total Acreage	24
Total Agricultural Production <sup>b</sup>	11
Commodity, by Value	
Figs	1
Pistachios	3
Grapes, Raisin Variety	4
Almonds	4
Grapes, Table Variety	5
Cattles & Calves	6
Grapes, Wine Variety	7
Corn, Silage	7
Cherries	7
Milk, Market	8
<b>Ranking of Madera County Among Counties of the United States</b>	
Total Agricultural Production <sup>c</sup>	14
a/ US Bureau of Census, 2016 Estimate	
b/ County Agricultural Commissioner's Data, 2016	
c/ USDA Ag Census, 2012	

Madera County Crop Reports from 2001 to 2017 are available at:  
[www.maderacounty.com/government/agricultural-commissioner-weight-and-measure](http://www.maderacounty.com/government/agricultural-commissioner-weight-and-measure)

# 2017 Sustainable Agriculture Report 1

## Pest Prevention

Pest prevention programs are mandated by the California Food and Agricultural Code to prevent the introduction and spread of pests in California. Pest prevention involves three strata: pest exclusion, pest detection and integrated pest management.

The Pest Exclusion Program prevents the introduction of injurious pests that are not of common occurrence in the county.

Over 400 beehive shipments received from Red Imported Fire Ants (RIFA) infested states, with over 170,000 beehives, were inspected for RIFA.

During 2017, eleven nursery locations were inspected to ensure pest cleanliness.

Countries receiving agricultural commodities require certification that the commodities are free from potentially injurious pests. Over 4,400 phytosanitary inspections were performed on Madera County commodities, which were exported to 74 countries.

The State of California's Pest Detection Program utilizes insect traps and surveys for the detection of foreign pests which may have eluded exclusion efforts. The trapping program targeted multiple pests, including the following:

Asian Citrus Psyllid ( <i>Diaphorina citri</i> Kuwayama)	Caribbean Fruit Fly ( <i>Anastrepha suspens</i> )
European Corn Borer ( <i>Ostrinia nubilalis</i> )	Gypsy Moth ( <i>Lymentria dispar</i> )
Japanese Beetle ( <i>Popillia japonica</i> )	Light Brown Apple Moth ( <i>Epiphyas postvittana</i> )
Mediterranean Fruit Fly ( <i>Ceratitis capitata</i> )	Melon Fruit Fly ( <i>Dacus cucurbitae</i> )
Mexican Fruit Fly ( <i>Anastrepha ludens</i> )	Oriental Fruit Fly ( <i>Bactrocera dorsalis</i> )

The Integrated Pest Control Program strives to eradicate infestations of new pests before they become widespread. Pink Bollworm (*Pectinophora gossypiella*) a non-established and economically significant pest of cotton, is controlled by post-season plowdown of cotton plants. Pink Bollworm was controlled by post-season plowdown of 860 acres of cotton plantings.

### Pest Management

The Glassy-winged Sharpshooter Program serves to detect and control the vector of Pierce's Disease, a potentially catastrophic disease of vineyards. This program involved the placement of 890 traps in both urban and agricultural sites followed by over 11,200 subsequent trap servicings. In addition, incoming shipments of host material and susceptible county plantings were inspected.

Multiple Glassy-winged Sharpshooters were found in Madera County in 2017, which led to additional placement of delimitation traps also followed by subsequent trap servicings.

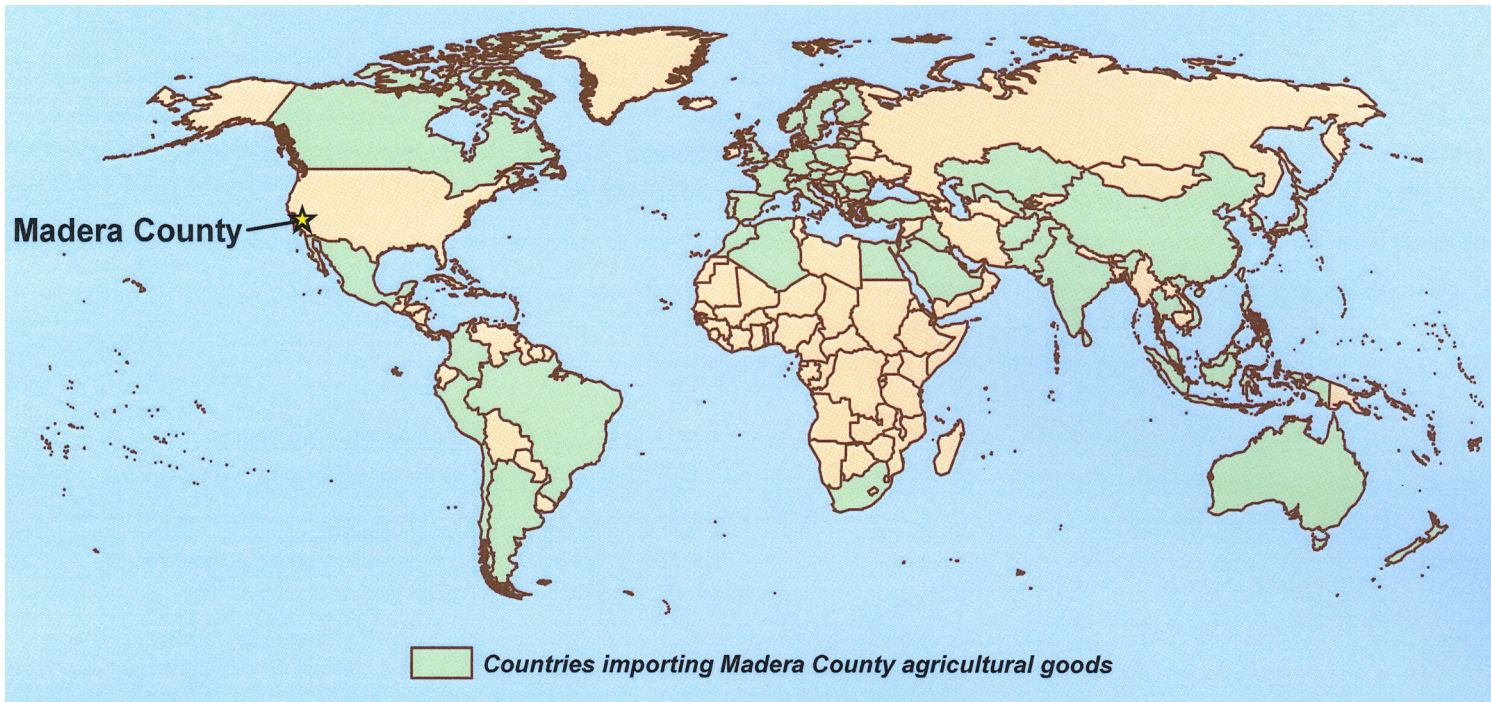
Additionally, the California Department of Food and Agriculture (CDFA) released two parasitic wasps (*Gonatocerus morgani* and *G. morrilli*) in 2017 to aid in the control of the Glassy-winged Sharpshooters. Over nine hundred and ninety parasitoids were released in the Wildwood and Rolling Hills areas.

### Organic Farming

Sixty-four (64) organic producers and 11 handlers/processors were registered in Madera County in 2017. Utilizing organic principles defined in the California Organic Products Act of 2003, these farms produce a wide array of commodities, such as:

*alfalfa, almonds, apples, apricots, artichokes, basil, dried beans, green beans, beets, berries, broccoli, cabbage, cantaloupe, carrots, cauliflower, chard, cherries, cilantro, collards greens, coriander, sweet corn, cucumbers, daikon, dill, fennel, figs, garlic, gourds, grapes (table, raisin, wine), grapefruit, hay, herbs, kale, kiwifruit, kohlrabi, leeks, lemons, lettuce, livestock, mustard greens, oats, okra, olives, onions, oranges, parsley, pasture, peas, peppers, persimmons, pistachio, plums, pomegranates, popcorn, potatoes, poultry, prunes, pumpkins, radish, rutabagas, seed crops, spinach, squash, tomatillos, tomatoes, turnips, walnuts, watermelons, and wheat.*

The value of organic production in Madera County in 2017 was **\$45,100,000**.



**74 Countries Received Madera County Commodities in 2017:**

- |                          |                      |                        |                      |
|--------------------------|----------------------|------------------------|----------------------|
| ❖ Afghanistan            | ❖ Albania            | ❖ Algeria              | ❖ Argentina          |
| ❖ Australia              | ❖ Austria            | ❖ Bahrain              | ❖ Belgium            |
| ❖ Bosnia and Herzegovina | ❖ Brazil             | ❖ Bulgaria             | ❖ Canada             |
| ❖ Chile                  | ❖ China              | ❖ Colombia             | ❖ Croatia            |
| ❖ Cyprus                 | ❖ Czech Republic     | ❖ Denmark              | ❖ Dominican Republic |
| ❖ Egypt                  | ❖ Estonia            | ❖ Finland              | ❖ France             |
| ❖ French Polynesia       | ❖ Germany            | ❖ Greece               | ❖ Hong Kong          |
| ❖ Hungary                | ❖ India              | ❖ Indonesia            | ❖ Iraq               |
| ❖ Israel                 | ❖ Italy              | ❖ Japan                | ❖ Jordan             |
| ❖ Kazakhstan             | ❖ Korea, Republic of | ❖ Kuwait               | ❖ Latvia             |
| ❖ Lebanon                | ❖ Libya              | ❖ Lithuania            | ❖ Malaysia           |
| ❖ Mauritius              | ❖ Mexico             | ❖ Morocco              | ❖ Netherlands        |
| ❖ New Zealand            | ❖ Norway             | ❖ Pakistan             | ❖ Panama             |
| ❖ Peru                   | ❖ Philippines        | ❖ Poland               | ❖ Portugal           |
| ❖ Qatar                  | ❖ Romania            | ❖ Saudi Arabia         | ❖ Serbia             |
| ❖ Singapore              | ❖ South Africa       | ❖ Spain                | ❖ Sri Lanka          |
| ❖ Sweden                 | ❖ Switzerland        | ❖ Taiwan               | ❖ Tajikistan         |
| ❖ Thailand               | ❖ Turkey             | ❖ United Arab Emirates | ❖ United Kingdom     |
| ❖ Uzbekistan             | ❖ Viet Nam           |                        |                      |

**Madera County Commodities Exported:**

- |                       |                     |              |             |
|-----------------------|---------------------|--------------|-------------|
| ❖ Almonds             | ❖ Figs              | ❖ Grapes     | ❖ Kiwifruit |
| ❖ Corn Flour          | ❖ Nursery Rootstock | ❖ Pistachios | ❖ Plums     |
| ❖ Pomegranates        | ❖ Prunes            | ❖ Raisins    | ❖ Seeds     |
| ❖ Tillandsia (Plants) | ❖ Walnuts           |              |             |



**RAINFALL - MADERA, CALIFORNIA (1968 - 2017)**

<b>YEAR</b>	<b>JUL</b>	<b>AUG</b>	<b>SEPT</b>	<b>OCT</b>	<b>NOV</b>	<b>DEC</b>	<b>JAN</b>	<b>FEB</b>	<b>MAR</b>	<b>APR</b>	<b>MAY</b>	<b>JUNE</b>	<b>TOTAL</b>
1968-69	0.00	0.03	0.00	1.22	2.26	3.24	5.69	4.37	1.60	1.74	0.02	0.00	<b>20.17</b>
1969-70	0.07	0.00	0.13	0.52	1.01	1.45	3.42	0.84	2.09	0.21	0.00	0.19	<b>9.93</b>
1970-71	0.00	0.00	0.00	0.24	1.97	2.85	0.45	0.22	1.01	0.83	1.77	0.00	<b>9.34</b>
1971-72	0.00	0.00	0.02	0.04	0.58	1.72	0.19	0.70	0.00	0.56	0.03	0.05	<b>3.89</b>
1972-73	0.02	0.00	0.14	0.49	4.07	1.40	2.23	3.71	2.98	0.39	0.00	0.02	<b>15.45</b>
1973-74	0.00	0.00	0.00	1.55	1.15	2.36	2.26	0.42	2.32	0.72	0.00	0.00	<b>10.78</b>
1974-75	0.00	0.00	0.00	1.10	0.52	1.54	0.43	1.56	2.17	1.81	0.00	0.00	<b>9.13</b>
1975-76	0.00	0.15	0.19	1.26	0.34	0.10	0.10	3.64	0.64	1.60	0.00	0.00	<b>8.02</b>
1976-77	0.05	0.27	0.94	0.66	0.87	1.18	0.60	0.22	1.05	0.00	0.77	0.00	<b>6.61</b>
1977-78	0.00	0.00	0.00	0.00	0.58	2.36	3.14	4.27	5.04	2.90	0.00	0.00	<b>18.29</b>
1978-79	0.02	0.00	1.61	0.03	3.04	0.54	3.97	3.18	2.14	0.11	0.12	0.00	<b>14.76</b>
1979-80	0.00	0.00	0.00	0.66	1.00	1.50	3.61	3.81	1.50	0.63	0.25	0.00	<b>12.96</b>
1980-81	0.00	0.00	0.00	0.12	0.26	0.58	2.74	0.76	3.42	1.03	0.00	0.00	<b>8.91</b>
1981-82	0.00	0.00	0.00	1.36	1.99	0.81	1.97	1.42	3.44	2.94	0.00	0.20	<b>14.13</b>
1982-83	0.00	0.00	0.84	1.29	3.16	1.78	4.97	3.40	5.12	1.90	0.83	0.00	<b>23.29</b>
1983-84	0.00	0.00	0.22	0.66	2.58	2.45	0.35	1.48	0.59	0.18	0.00	0.00	<b>8.51</b>
1984-85	0.00	0.00	0.00	0.87	2.37	2.12	0.59	0.71	1.65	0.52	0.00	0.34	<b>9.17</b>
1985-86	0.00	0.12	0.11	0.54	2.76	1.03	1.37	5.22	3.16	0.51	0.15	0.00	<b>14.97</b>
1986-87	0.00	0.00	0.43	0.00	0.00	0.97	1.60	2.26	2.91	0.36	0.03	0.02	<b>8.58</b>
1987-88	0.00	0.00	0.00	1.96	0.48	1.52	0.90	0.50	0.59	2.03	0.29	0.03	<b>8.30</b>
1988-89	0.00	0.00	0.00	0.00	1.42	2.04	0.40	1.20	2.13	0.17	0.11	0.00	<b>7.47</b>
1989-90	0.00	0.03	0.94	0.55	0.54	0.00	2.32	1.38	0.71	1.41	2.36	0.00	<b>10.24</b>
1990-91	0.00	0.00	0.04	0.03	0.53	0.64	0.15	1.25	7.11	0.17	0.05	0.01	<b>9.98</b>
1991-92	0.00	0.02	0.00	0.87	0.23	1.08	1.43	2.88	2.13	0.02	0.00	0.00	<b>8.66</b>
1992-93	0.09	0.00	0.00	1.33	0.04	3.08	5.16	2.69	2.92	0.32	0.71	0.43	<b>16.77</b>
1993-94	0.00	0.00	0.00	0.06	0.77	1.39	1.85	1.77	0.43	1.89	2.61	0.00	<b>10.77</b>
1994-95	0.00	0.00	0.13	1.41	1.61	1.36	5.18	0.71	4.82	1.21	0.79	0.48	<b>17.70</b>
1995-96	0.00	0.00	0.00	0.00	0.00	2.42	2.62	3.98	2.34	0.84	0.52	0.32	<b>13.04</b>
1996-97	0.00	0.00	0.00	1.83	2.55	5.02	5.05	0.19	0.00	0.00	0.00	0.00	<b>14.64</b>
1997-98	0.00	0.01	0.13	0.00	2.55	1.65	4.22	5.69	4.26	2.03	1.38	0.74	<b>22.66</b>
1998-99	0.00	0.00	0.88	0.19	0.34	0.95	2.18	1.67	0.63	1.62	0.06	0.05	<b>8.57</b>
1999-00	0.00	0.00	0.00	0.00	0.61	0.08	3.59	6.13	1.35	1.26	0.16	0.46	<b>13.64</b>
2000-01	0.00	0.00	0.27	2.82	0.07	0.13	2.33	1.98	1.71	1.08	0.00	0.00	<b>10.39</b>
2001-02	0.02	0.00	0.02	0.51	1.89	2.42	1.40	0.34	1.14	0.23	0.33	0.22	<b>8.52</b>
2002-03	0.00	0.00	0.00	0.00	2.80	2.85	0.51	1.51	0.64	1.74	0.87	0.00	<b>10.92</b>
2003-04	0.00	0.06	0.00	0.00	0.34	2.88	0.95	2.20	0.56	0.00	0.00	0.00	<b>6.99</b>
2004-05	0.00	0.00	0.00	3.89	1.07	3.67	2.10	3.04	2.59	0.60	3.32	0.00	<b>20.28</b>
2005-06	0.00	0.04	0.01	0.00	0.00	2.49	3.10	0.65	3.80	2.55	0.00	0.00	<b>12.64</b>
2006-07	0.00	0.00	0.00	0.40	0.56	1.40	0.65	1.86	0.57	0.35	0.05	0.00	<b>5.84</b>
2007-08	0.00	0.00	0.15	0.32	0.09	2.13	2.78	2.21	0.00	0.00	0.26	0.00	<b>7.94</b>
2008-09	0.00	0.00	0.00	0.00	1.19	1.27	1.95	3.24	0.83	0.00	0.00	0.00	<b>8.48</b>
2009-10	0.00	0.00	0.06	1.14	0.17	2.69	2.48	2.77	2.04	2.69	0.22	0.00	<b>14.26</b>
2010-11	0.00	0.00	0.00	0.21	2.31	5.40	1.88	1.50	4.17	0.24	0.45	1.41	<b>17.57</b>
2011-12	0.00	0.00	0.00	0.72	0.89	0.08	0.89	0.46	2.92	2.61	0.00	0.12	<b>8.69</b>
2012-13	0.00	0.00	0.00	0.07	1.84	3.42	1.33	0.74	0.12	0.98	0.06	0.00	<b>8.56</b>
2013-14	0.00	0.00	0.02	0.07	0.25	0.23	0.32	2.16	0.48	1.11	0.00	0.00	<b>4.64</b>
2014-15	0.00	0.00	0.04	0.00	1.06	2.41	0.00	0.66	0.01	0.94	0.45	0.00	<b>5.57</b>
2015-16	0.02	0.00	0.14	0.29	1.81	2.24	4.14	0.46	3.84	3.14	0.01	0.02	<b>16.11</b>
2016-17	0.00	0.00	0.00	0.77	1.42	2.22	4.98	3.88	0.60	0.45	0.12	0.00	<b>14.44</b>
2017-18	0.00	0.00	0.10	0.07	0.10	0.09	1.14	0.21	4.75	0.71	0.00	0.00	<b>7.17</b>
<b>Average</b>	<b>0.01</b>	<b>0.01</b>	<b>0.15</b>	<b>0.64</b>	<b>1.20</b>	<b>1.78</b>	<b>2.15</b>	<b>2.04</b>	<b>2.06</b>	<b>1.03</b>	<b>0.38</b>	<b>0.10</b>	<b>11.57</b>



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