



2016 Agricultural Report
San Joaquin County
Bees Our Invaluable Workforce



Table of Contents

County Administration.....	1
Letter from the Commissioner.....	2
Agricultural Commissioner Staff.....	3
Fruit and Nut Crops.....	4
Field Crops.....	6
Vegetable Crops.....	7
Livestock and Poultry.....	8
Livestock and Poultry Products.....	8
Apiary Products.....	9
Nursery Products.....	10
Seed Crops.....	10
Top Ten Crops.....	11
State Ranking.....	12
Trading Partners.....	13
The Bee Bees-Ness.....	14
Sustainable Agriculture.....	16
Direct Marketing/Organic.....	18
Weights and Measures.....	19
Trivia.....	20
General San Joaquin County Information.....	21

SAN JOAQUIN COUNTY
AGRICULTURAL COMMISSIONER'S OFFICE

2016 ANNUAL CROP REPORT

BOARD OF SUPERVISORS



Chuck Winn
Chair, District 4



Miguel Villapudua
Vice Chair, District 1



Katherine Miller
District 2



Tom Patti
District 3



Bob Elliott
District 5

County Administrator

Monica Nino

Agricultural Commissioner/Sealer

Tim Pelican

Compiled by

Khrista Delucchi, Tiffany Gonsalves, and Rick Schwieger

Karen Ross, Secretary
California Department of Food and Agriculture, and
The Honorable Board of Supervisors, San Joaquin County

Dear Secretary and Board Members:

In accordance with Section 2279 of the California Food and Agricultural Code, I am pleased to present the eighty-third Annual Report of Agricultural Production in San Joaquin County.

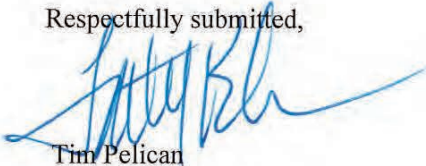
The gross value of agricultural production for 2016 was \$2,337,922,000. This represents a 14.45% decrease over the 2015 value of \$2,732,917,000.

There were significant changes for 2016. Fruit and Nut Crops saw a loss of \$161,556,000 in value, which was a decrease of 11.68% from 2015. Adverse weather conditions led to a poor cherry crop and a decline in price for both almonds and walnuts played a major role in the overall decrease in value. Fruit and Nut Crops were still the largest in total value at \$1,221,731,000. Field Crops saw a decrease of 37.10% due to; conversion to permanent crops, fallowed land, and destructive weather conditions. The total value for Field Crops was \$174,309,000. Vegetable Crops also saw a decrease in total value, concluding the year with a 13.87% loss. Livestock and Poultry decreased 30.27%, due to drop in prices and lower production ending the year with a total value of \$127,272,000. Livestock and Poultry Products were valued at \$398,967,000, representing a decrease of 8.47%, largely due to a lower price per dozen for eggs. There were increases in some categories; the largest was Apiary Products, which saw an increase of 18.89%. Nursery Products and Seed Crops increased less than 7% in value.

The values shown are estimates based on the most common method of sale for the individual commodity, except for fresh fruits and vegetables where the value is based on the freight on board (FOB) packed price at the shipping point. The figures contained in this report are gross values rather than net returns to the grower.

I wish to express my appreciation to all who cooperated in providing data for this report, including our agricultural producers, industry representatives and other public agencies. I would also like to express my sincere thanks to the Agricultural Commissioner's staff, especially Agricultural Biologists Khrista Delucchi, Tiffany Gonsalves, and Rick Schwieger for compiling the necessary information that made this report possible.

Respectfully submitted,



Tim Pelican
Agricultural Commissioner/Sealer

Agricultural Commissioner/Sealer

Tim Pelican

Assistant Agricultural Commissioner

Kamal Bagri

Deputy Agricultural Commissioners

Martin Brockman

Barbara Huecksteadt

Donald McCoon, Jr.

Robert Pelletier

Deputy Sealer of Weights and Measures

Dave Singh

Weights and Measures Inspectors

Ben Delph

Matthew Hoekman

Harrison McDowall

Agricultural Biologist/Standards Inspectors

Tom Dawson

Jatinder Gill

Tiffany Gonsalves

Josh Hanson

Maria Jochimsen

Rod Saiki

Ted Viss

Senior Agricultural Biologists

Colleen Bednarek

Humberto Castro

Raung Long

Vanze Lum

Kim Martin

Rand Medina

Sue Williamson

Agricultural Biologists I

Erik Baxter

Khrista Delucchi

Katie Moreno

Rick Schwieger

Senior Office Assistants

Jamise Clyburn

Monica Hernandez

Laura Rocha

Jo Tengonciang

Office Assistants

Cara Robbins

Amandeep Kalkat

Information Systems Analyst II

Ferdinand Pura

Account Technician I

Share Hawkins

Account Technician II

Terry King

Office Specialist

Hiromi Hernandez

Agricultural & Standards Technician

Amy Lewis

Agricultural and Standards Program Aides

Laura Beasley

Brendt Boyer

Heather Cervantes

Joann Dunn

Darla Durbin

Rosemarie Engstrom

Jorge Garibay

Adrian Gladney

Robert Guzzi

Elizabeth Hinojosa

Leticia Hinojosa

Kevin Hooks

Nela Holsapple

Vicky Hurles

Sherry King

Brett Koth

Santiago Madrigal

Judy Nepote

Nick Nwigwe

Joe Pimentel

Elvira Rios-Prock

Elena Perez-Razon

Renee St. Germain

Luis Salcedo

Sherwin Shegarfi

Jack Snyder

Lynn Stoner

Paula Woodward

Casey Wright

Larry Wright

SAN JOAQUIN
—COUNTY—

Greatness grows here.

FRUIT AND NUT CROPS

CROP	YEAR	PRODUCTION				GROSS VALUE		
		BEARING ACREAGE	PER ACRE	TOTAL	UNIT	PER UNIT	SUBTOTAL	TOTAL
ALMOND, MEATS	2016	71,100	1.02	72,700	TON	\$4,800.00		\$348,819,000
	2015	65,300	0.96	62,400	TON	\$6,950.00		\$433,484,000
ALMOND, HULLS	2016			145,000	TON	\$68.00		\$9,882,000
	2015			125,000	TON	\$147.00		\$18,326,000
ALMOND SHELLS	2016			72,700	TON	\$5.00		\$362,000
	2015			62,400	TON	\$21.00		\$1,311,000
APPLES, ALL	2016	2,330	17.16	40,100	TON	\$413.00		\$16,558,000
	2015	2,320	20.82	48,300	TON	\$446.00		\$21,524,000
FRESH	2016			30,000	TON	\$488.00	\$14,656,000	
	2015			36,200	TON	\$521.00	\$18,868,000	
PROCESSING	2016			10,000	TON	\$190.00	\$1,903,000	
	2015			12,100	TON	\$220.00	\$2,656,000	
APRICOTS	2016	638	9.36	5,970	TON	\$675.00		\$4,028,000
	2015	637	7.20	4,590	TON	\$692.00		\$3,174,000
BLUEBERRIES	2016	1,250	5.00	6,250	TON	\$4,250.00		\$26,597,000
	2015	1,260	4.78	6,000	TON	\$3,560.00		\$21,373,000
CHERRIES, ALL	2016	19,700	1.19	23,600	TON	\$2,480.00		\$58,541,000
	2015	20,300	2.60	52,900	TON	\$3,430.00		\$181,152,000
FRESH	2016			14,400	TON	\$3,560.00	\$51,184,000	
	2015			47,600	TON	\$3,720.00	\$177,173,000	
PROCESSING	2016			6,830	TON	\$220.00	\$1,503,000	
	2015			5,230	TON	\$760.00	\$3,978,000	
GRAPES, ALL	2016	98,000	7.31	716,000	TON	\$594.00		\$425,781,000
	2015	97,900	6.23	610,000	TON	\$576.00		\$351,453,000
OLIVES, PROCESSING	2016	3,340	6.34	21,200	TON	\$602.00		\$12,765,000
	2015	3,480	5.84	20,300	TON	\$520.00		\$10,553,000

NUMBERS MAY NOT COMPUTE EXACTLY DUE TO ROUNDING



FRUIT AND NUT CROPS

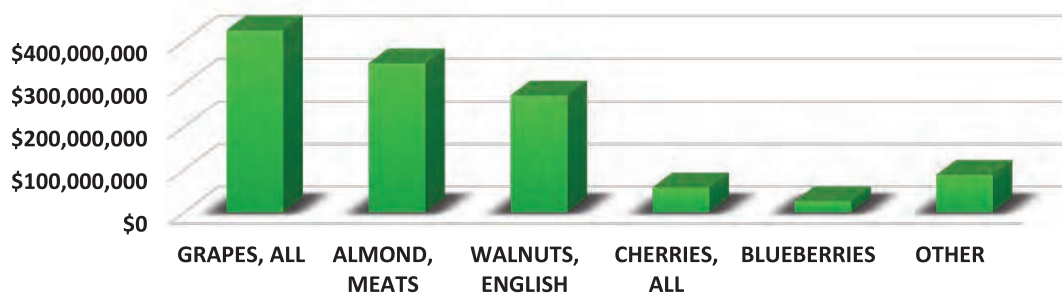
CROP	YEAR	BEARING ACREAGE	PRODUCTION			GROSS VALUE		
			PER ACRE	TOTAL	UNIT	PER UNIT	SUBTOTAL	TOTAL
PEACHES, ALL	2016	1,760	17.90	31,600	TON	\$490.00		\$15,485,000
	2015	1,690	17.66	29,800	TON	\$442.00		\$13,181,000
CLINGSTONE	2016	1,150	18.84	21,600	TON	\$498.00	\$10,765,000	
	2015	1,070	19.39	20,700	TON	\$464.00	\$9,632,000	
FREESTONE	2016	617	16.14	9,960	TON	\$474.00	\$4,720,000	
	2015	619	14.66	9,070	TON	\$391.00	\$3,550,000	
PEARS	2016	186	16.44	3,050	TON	\$439.00		\$1,341,000
	2015	185	15.28	2,820	TON	\$431.00		\$1,217,000
WALNUTS, ENGLISH	2016	67,200	2.07	139,000	TON	\$1,970.00		\$273,965,000
	2015	64,100	2.18	140,000	TON	\$2,280.00		\$319,723,000
MISCELLANEOUS	2016	1,030						\$5,737,000
	2015	1,080						\$4,853,000
ORGANIC	2016							\$21,870,000
TOTAL	2016	267,000						\$1,221,731,000
	2015	258,000						\$1,383,287,000

NUMBERS MAY NOT COMPUTE EXACTLY DUE TO ROUNDING

* MISCELLANEOUS NOW INCLUDES BIOMASS



TOP 5 FRUIT AND NUT CROPS BY VALUE



FIELD CROPS

CROP	YEAR	HARVESTED		PRODUCTION		GROSS VALUE		
		ACREAGE	PER ACRE	TOTAL	UNIT	PER UNIT	SUBTOTAL	TOTAL
BEANS, DRY, ALL	2016	6,500	1.20	7,900	TON	\$1,060.00		\$8,320,000
	2015	10,200	1.23	12,600	TON	\$1,450.00		\$18,246,000
LIMA	2016	1,570	1.34	2,100	TON	\$1,250.00	\$2,623,000	
	2015	2,840	1.39	3,940	TON	\$1,860.00	\$7,315,000	
BEANS, OTHER	2016	4,960	1.16	5,800	TON	\$990.00	\$5,697,000	
	2015	7,350	1.17	8,600	TON	\$1,260.00	\$10,932,000	
CORN, GRAIN	2016	42,300	5.19	220,000	TON	\$156.00		\$34,243,000
	2015	49,100	5.01	246,000	TON	\$146.00		\$35,915,000
HAY, ALL	2016	58,800	6.03	355,000	TON	\$139.00		\$49,297,000
	2015	61,700	6.28	387,000	TON	\$185.00		\$71,781,000
ALFALFA	2016	51,300	6.38	327,000	TON	\$143.00	\$46,796,000	
	2015	54,900	6.67	366,000	TON	\$189.00	\$69,126,000	
OTHER	2016	7,540	3.63	27,300	TON	\$91.00	\$2,501,000	
	2015	6,710	3.08	20,600	TON	\$129.00	\$2,655,000	
PASTURE & RANGE	2016	135,000			ACRE	\$46.30		\$6,248,000
	2015	135,000			ACRE	\$39.20		\$5,291,000
IRRIGATED	2016	14,500			ACRE	\$268.00	\$3,886,000	
	2015	14,500			ACRE	\$198.00	\$2,871,000	
OTHER	2016	120,000			ACRE	\$19.00	\$2,339,000	
	2015	120,000			ACRE	\$20.00	\$2,400,000	
RICE	2016	4,410	3.50	15,400	TON	\$276.00		\$4,252,000
	2015	3,210	4.23	13,600	TON	\$410.00		\$5,563,000
SAFFLOWER	2016	6,550	1.40	9,170	TON	\$459.00		\$4,213,000
	2015	3,080	1.18	3,630	TON	\$513.00		\$1,860,000
SILAGE, CORN	2016	34,600	27.13	938,000	TON	\$31.30		\$29,369,000
	2015	40,200	29.29	1,177,000	TON	\$42.70		\$50,223,000
SILAGE, OTHER INCLUDES GREEN CHOP	2016	97,000	11.51	1,120,000	TON	\$24.40		\$27,297,000
	2015	109,000	14.89	1,626,000	TON	\$45.10		\$73,279,000
WHEAT	2016	21,800	2.93	63,800	TON	\$125.00		\$7,980,000
	2015	18,600	3.09	57,400	TON	\$229.00		\$13,151,000
MISCELLANEOUS	2016	1,290						\$849,000
	2015	1,900						\$1,792,000
ORGANIC	2016							\$2,241,000
TOTAL	2016	408,000						\$174,309,000
	2015	432,000						\$277,101,000

NUMBERS MAY NOT COMPUTE EXACTLY DUE TO ROUNDING

BEANS, OTHER INCLUDES BLACK EYE, KIDNEY, GARBANZO AND ALL OTHER BEANS NOT LISTED



VEGETABLE CROPS

CROP	YEAR	PRODUCTION				GROSS VALUE		
		HARVESTED ACREAGE	PER ACRE	TOTAL	UNIT	PER UNIT	SUBTOTAL	TOTAL
ASPARAGUS	2016	1,330	2.53	3,370	TON	\$3,460.00		\$11,658,000
	2015	2,820	2.88	8,120	TON	\$4,030.00		\$32,718,000
CORN, SWEET	2016	3,480	7.62	26,600	TON	\$280.00		\$7,450,000
	2015	3,040	8.10	24,600	TON	\$277.00		\$6,810,000
CUCUMBERS	2016	2,930	7.40	21,700	TON	\$190.00		\$4,118,000
	2015	2,800	7.93	22,200	TON	\$136.00		\$3,026,000
MELONS, ALL	2016	3,100	48.28	149,800	TON	\$310.00		\$46,362,000
	2015	2,990	31.77	95,100	TON	\$360.00		\$34,243,000
WATERMELON	2016	2,160	59.89	129,500	TON	\$323.00	\$41,859,000	
	2015	2,660	33.46	88,900	TON	\$364.00	\$32,327,000	
OTHER	2016	939	21.54	20,240	TON	\$225.00	\$4,503,000	
	2015	335	18.40	6,150	TON	\$316.00	\$1,916,000	
ONIONS	2016	1,520	22.50	34,200	TON	\$240.00		\$8,206,000
	2015	974	19.86	19,300	TON	\$197.00		\$3,805,000
PEPPERS	2016	920	14.55	13,390	TON	\$469.00		\$6,275,000
	2015	270	20.29	5,470	TON	\$632.00		\$3,454,000
POTATOES	2016	3,900	18.65	72,700	TON	\$660.00		\$47,978,000
	2015	4,020	21.25	85,400	TON	\$732.00		\$62,484,000
PUMPKINS	2016	3,370	22.35	75,400	TON	\$376.00		\$28,385,000
	2015	2,620	22.73	59,600	TON	\$357.00		\$21,259,000
TOMATOES, ALL	2016	26,300	47.45	1,249,000	TON	\$83.40		\$104,152,000
	2015	37,200	43.72	1,629,000	TON	\$91.40		\$148,845,000
SHIPPING	2016	1,810	16.50	29,900	TON	\$466.00	\$13,911,000	
	2015	2,830	11.81	33,400	TON	\$495.00	\$16,533,000	
PROCESSING	2016	24,500	49.74	1,219,000	TON	\$74.00	\$90,241,000	
	2015	34,400	46.34	1,595,000	TON	\$82.90	\$132,313,000	
MISCELLANEOUS	2016	3,690						\$13,410,000
	2015	1,920						\$8,525,000
ORGANIC	2016							\$2,071,000
TOTAL	2016	50,500						\$280,065,000
	2015	58,700						\$325,169,000

NUMBERS MAY NOT COMPUTE EXACTLY DUE TO ROUNDING



LIVESTOCK AND POULTRY

ITEM	YEAR	NO. HEAD	LIVE WEIGHT	UNIT	GROSS VALUE	
					PER UNIT	TOTAL
CATTLE & CALVES	2016	125,000	993,000	CWT	\$107.00	\$106,251,000
	2015	126,000	996,000	CWT	\$153.00	\$152,388,000
SHEEP & LAMBS	2016	16,600	21,200	HD	\$120.00	\$2,539,000
	2015	16,600	21,600	HD	\$131.00	\$2,817,000
BROILERS	2016	689,000	3,613,000	LBS	\$0.51	\$1,824,000
	2015	2,037,000	12,019,000	LBS	\$0.80	\$9,615,000
TURKEYS	2016	380,000	8,133,000	LBS	\$0.98	\$7,946,000
	2015	320,000	7,354,000	LBS	\$1.03	\$7,574,000
MISCELLANEOUS	2016					\$8,712,000
	2015					\$10,119,000
TOTAL	2016					\$127,272,000
	2015					\$182,513,000

MISCELLANEOUS INCLUDES HOGS, GOATS, SQUAB, DUCKS AND OTHER FOWL

LIVESTOCK AND POULTRY PRODUCTS

ITEM	YEAR	PRODUCTION	UNIT	PER UNIT	GROSS VALUE
					TOTAL
MILK, ALL	2016	23,860,000	CWT	\$15.20	\$362,196,000
	2015	24,026,000	CWT	\$15.50	\$372,170,000
WOOL	2016	113,000	LBS	\$1.45	\$164,000
	2015	113,000	LBS	\$1.65	\$186,000
EGGS, CHICKEN, ALL	2016	31,223,000	DOZ	\$1.15	\$35,765,000
	2015	32,027,000	DOZ	\$1.95	\$62,441,000
EGGS, CHICKEN, ORGANIC	2016				\$8,817,000
EGGS, CHICKEN	2016				\$26,948,000
MANURE	2016	208,000	TON	\$4.05	\$842,000
	2015	215,000	TON	\$5.05	\$1,083,000
TOTAL	2016				\$398,967,000
	2015				\$435,880,000

NUMBERS MAY NOT COMPUTE EXACTLY DUE TO ROUNDING



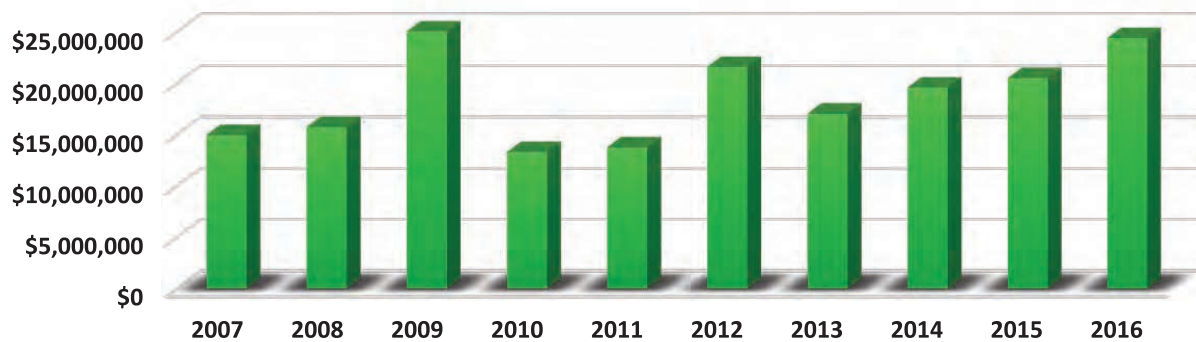
APIARY PRODUCTS

ITEM	YEAR	PRODUCTION	UNIT	GROSS VALUE	
				PER UNIT	TOTAL
HONEY	2016	220,000	LBS	\$2.75	\$604,000
	2015	196,000	LBS	\$2.17	\$425,000
POLLINATION	2016	157,000	HIVE	\$149.00	\$23,338,000
	2015	140,000	HIVE	\$143.00	\$19,959,000
MISCELLANEOUS	2016				\$486,000
	2015				\$148,000
TOTAL	2016				\$24,428,000
	2015				\$20,532,000

NUMBERS MAY NOT COMPUTE EXACTLY DUE TO ROUNDING
MISCELLANEOUS INCLUDES POLLEN, BEES, QUEENS, NUCLEUS, COLONIES AND BEESWAX



TEN YEAR APIARY VALUE TREND



NURSERY PRODUCTS

ITEM	YEAR	QUANTITY SOLD	UNIT	GROSS VALUE	
				TOTAL	
GRAPEVINES, STRAWBERRY PLANTS, FRUIT & NUT TREES	2016	80,326,000	PLANT	\$8,151,000	
	2015	87,346,000	PLANT	\$8,833,000	
VEGETABLE PLANTS	2016	242,606,000	PLANT	\$18,161,000	
	2015	334,633,000	PLANT	\$15,675,000	
FLOWERING POTTED PLANTS	2016	1,301,000	EACH	\$5,782,000	
	2015	943,000	EACH	\$2,599,000	
FOLIAGE PLANTS	2016	1,087,000	EACH	\$4,813,000	
	2015	1,670,000	EACH	\$10,739,000	
BEDDING PLANTS	2016	112,768,000	PLANT	\$8,050,000	
	2015	215,277,000	PLANT	\$11,324,000	
WOODY ORNAMENTALS	2016	7,496,000	EACH	\$35,551,000	
	2015	7,608,000	EACH	\$41,072,000	
BULBS, RHIZOMES, TURF, CACTUS, ETC.	2016			\$26,879,000	
	2015			\$14,578,000	
TOTAL	2016			\$107,387,000	
	2015			\$104,820,000	

NUMBERS MAY NOT COMPUTE EXACTLY DUE TO ROUNDING

SEED CROPS

CROP	YEAR	HARVESTED ACREAGE	PRODUCTION		UNIT	GROSS VALUE	
			PER ACRE	TOTAL		PER UNIT	TOTAL
BEANS, OTHER	2016	821	24.20	19,860	CWT	\$51.70	\$1,026,000
	2015	343	24.00	8,220	CWT	\$75.10	\$617,000
MISCELLANEOUS	2016	1,688					\$2,737,000
	2015	824					\$2,998,000
TOTAL	2016	2,510					\$3,763,000
	2015	1,170					\$3,615,000

NUMBERS MAY NOT COMPUTE EXACTLY DUE TO ROUNDING

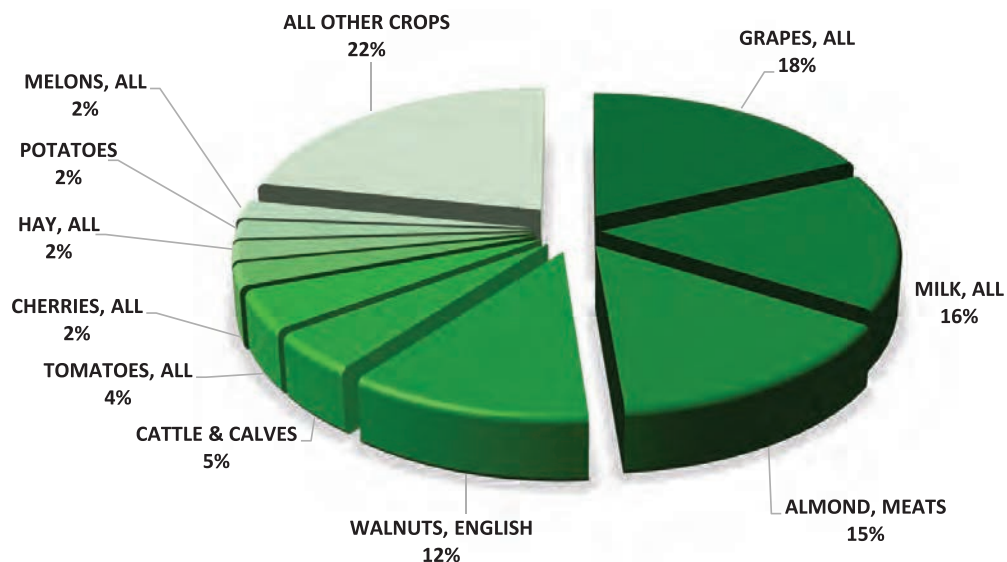


Top Ten Crops

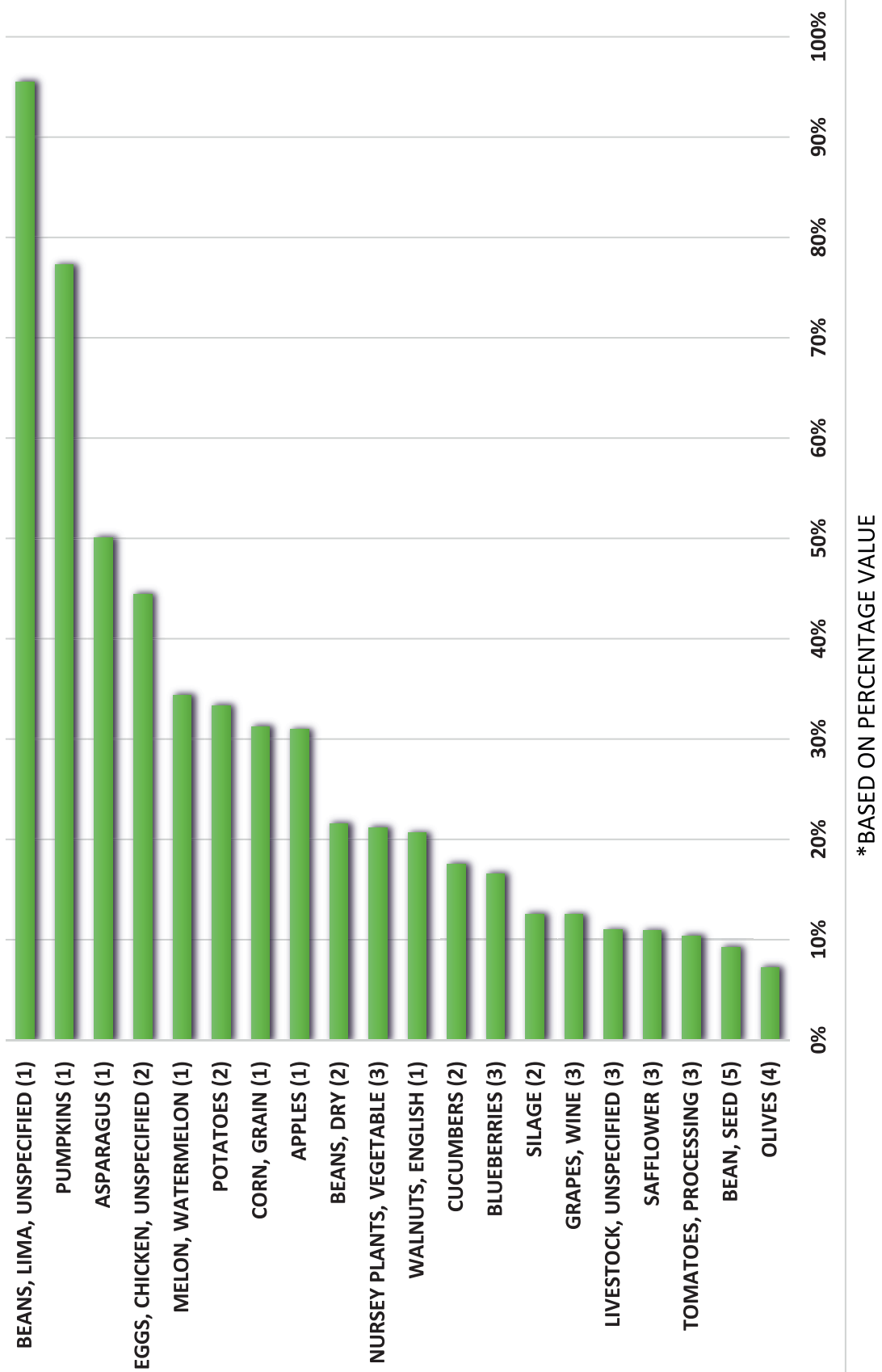
2015	
Almonds	\$433 M
Milk	\$372 M
Grapes	\$351 M
Walnuts	\$320 M
Cherries	\$181 M
Cattle & Calves	\$152 M
Tomatoes	\$149 M
Silage, Other	\$ 73 M
Hay, All	\$ 72 M
Eggs	\$ 62 M

2016	
Grapes	\$426 M ↑
Milk	\$362 M ↓
Almonds	\$349 M ↓
Walnuts	\$274 M ↓
Cattle & Calves	\$106 M ↓
Tomatoes	\$104 M ↓
Cherries	\$ 59 M ↓
Hay, All	\$ 49 M ↓
Potatoes	\$ 48 M ↓
Melons, All	\$ 46 M ↑

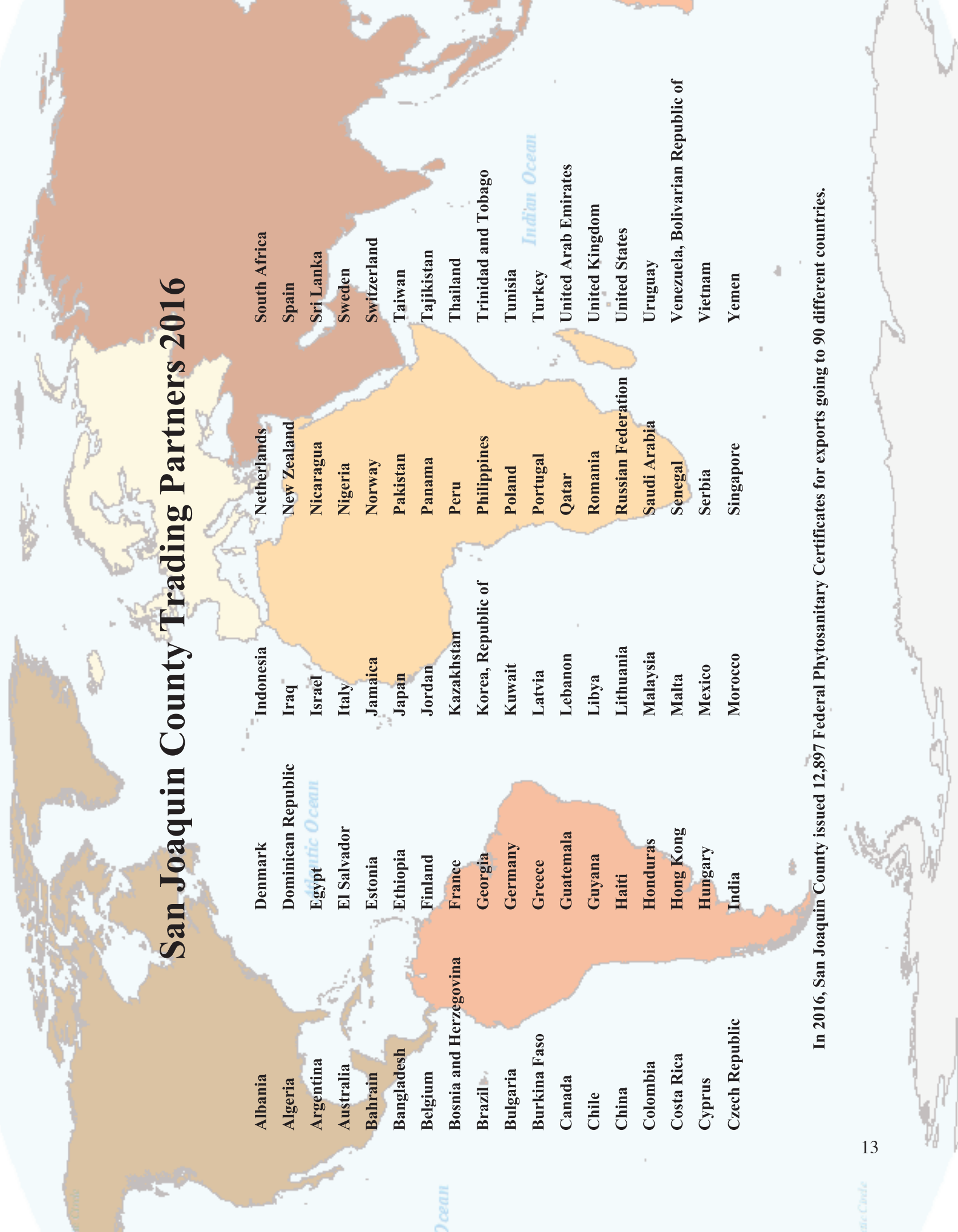
TOP TEN CROPS BY PERCENTAGE OF TOTAL VALUE



TOP 20 COMMODITIES BY PERCENTAGE OF CALIFORNIA PRODUCTION FOR 2015



San Joaquin County Trading Partners 2016



Albania	Denmark	Indonesia	Netherlands	South Africa
Algeria	Dominican Republic	Iraq	New Zealand	Spain
Argentina	Egypt	Israel	Nicaragua	Sri Lanka
Australia	El Salvador	Italy	Nigeria	Sweden
Bahrain	Estonia	Jamaica	Norway	Switzerland
Bangladesh	Ethiopia	Japan	Pakistan	Taiwan
Belgium	Finland	Jordan	Panama	Tajikistan
Bosnia and Herzegovina	France	Kazakhstan	Peru	Thailand
Brazil	Georgia	Korea, Republic of	Philippines	Trinidad and Tobago
Bulgaria	Germany	Kuwait	Poland	Tunisia
Burkina Faso	Greece	Latvia	Portugal	Turkey
Canada	Guatemala	Lebanon	Qatar	United Arab Emirates
Chile	Guyana	Libya	Romania	United Kingdom
China	Haiti	Lithuania	Russian Federation	United States
Colombia	Honduras	Malaysia	Saudi Arabia	Uruguay
Costa Rica	Hong Kong	Malta	Senegal	Venezuela, Bolivarian Republic of
Cyprus	Hungary	Mexico	Serbia	Vietnam
Czech Republic	India	Morocco	Singapore	Yemen

In 2016, San Joaquin County issued 12,897 Federal Phytosanitary Certificates for exports going to 90 different countries.

The Bee Bees-Ness

When we begin the process of putting out a crop report one of the things required early on is; what will this year's theme be? During these early discussions we had just had given a continuing education class on apiary health. This was our third such event in the last two years. It helped make this year's decision easy. When you examine the apiary industry in San Joaquin County and the crops that we produce it is easy to see how important pollinators are to our agriculture as a whole.

Bees are responsible for over a quarter of our total agricultural output. This year that number is roughly \$568,000,000. That is a large economic impact for a work force that is individually so small in size. The truth is that the apiary industry alone accounted for \$23,338,000 of the 2016 crop report. That number is solely for pollination services. There were 220,000



hives spread over 103,000 acres servicing at least 9 commodities, some of these like melons, pumpkins, apples and cherries are commodities that we lead the State in production. One of the topics being stressed nationwide is the protection of this most important and often overlooked work force. Pollinator health like many issues is a complex one. The decline in numbers has been distressing not only to the apiarists but those who depend on them for crop pollination, which in reality is the population throughout the world. Without pollinators we are without many of the foods we depend on. There have been many attempts in recent years to try to find a singular problem to the cause of the decline of our apiaries. Some of those being colony collapse, Varroa mites, Small hive beetles, Wax moths, Tracheal mites, both American and European foulbrood and of course the most vilified of all, the use of pesticides. The lack of a diversity of pollen being available at the time that these workers arrive has also been more in the forefront these days as well. Recently there have been some movement to help in these areas, bee keepers are more aware of the dangers of their hives being exposed to bees from other hives; putting their broods in contact with those from infested hives puts healthy hives at risk. Bee keepers are more aware of the dangers of using unregistered pesticides in their hives that may not be approved for the treatment they are being used for.

There has been a push for growers to spray crops with tank mixes



only at night during the time bees are not active. As a part of ongoing commitment to honey bee health, the Almond Board of California has developed a comprehensive set of Honey Bee Best Management Practices, a guideline for the Almond growers to follow during pollination season. There is a push to promote better forage being made available for bees providing better food sources for apiaries when they are not in the process of working crops. Especially the last few years with extreme drought there have been little food and water sources available near staging areas. Many of the bees working the commodities

within our county do not originate here, they come from other states. Expecting workers arriving from strange areas of the country and not providing them with the food and water they need to survive is a recipe for disaster.

There are groups like the Xerces Society and Natural Resources Conservation Service which have programs to help growers find seed sources and in some cases have grant funding available to help make farms



more friendly places for pollinators to live year round. Providing places for these all important members of our agricultural industry is one important step of the many that we as an industry needs to adopt to assure the future of agriculture. The largest single labor group in San Joaquin County is not what most people think it is. That work force would be the pollinator industry. Just like our farm labor industry there are some areas that are cause for alarm, such things as having a supplier that you can count on, in the numbers they are needed and when. Yes, there is a farm labor crisis!

Sustainable Agriculture

Pest Exclusion

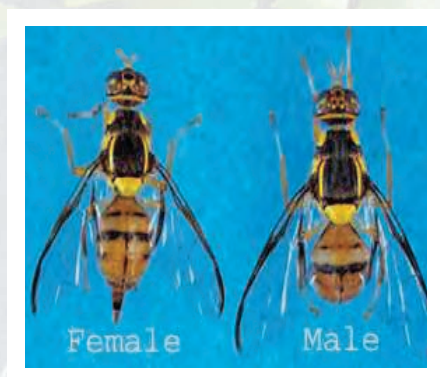
Pest Exclusion is our first line of prevention against invasive pests entering the county. Agricultural Biologists oversee the enforcement of quarantines by inspecting shipments entering the county. Inspections occur at various parcel facilities, nurseries and other locations.

Inspection Type	Shipments Inspected
Air Freight	83
GWSS Nursery	2,017
Gypsy Moth	10
Parcel	4,510
Sea Freight	8
Truck	434
Other	3

Pest and Weeds Intercepted

Insects/Weeds	Results	Rating
Brown Marmorated Stink Bug/ <i>Halyomorpha halys</i>	1 find	B
Light Brown Apple Moth/ <i>Epiphyas postvittana</i>	6 finds	A
Oriental Fruit Fly/ <i>Bactrocera dorsalis</i>	1 find	A
Peach Fruit Fly/ <i>Bactrocera zonata</i>	1 find	A
Asian Citrus Psyllid/ <i>Diaphorina citri</i>	18 finds	A
Japanese Dodder/ <i>Cuscuta japonica</i>	4 finds	A
Jungle Rice/ <i>Echinochloa colona</i>	1 find	Z
Bristly Oxtongue/ <i>Helminthotheca echioides</i>	1 find	Z
Assorted Non-Native Insects	7 finds	Q

A "Q" rated pest is a pest not known to occur in the United States. An "A" rated pest is a pest not known to occur in the State of California. A "B" rated pest is a pest not known to occur in San Joaquin County.



Oriental Fruit Fly



Japanese Dodder



Brown Marmorated Stink Bug

Pest Detection

Pest Detection is an additional line of defense that prevents invasive pests from becoming established. Early detection and localized eradication is key to stopping infestations. In 2016, San Joaquin County Pest Surveyors placed and monitored traps for the following pests:

Insect/Trap Type	Host Crops	Trapping Season	Traps	Trap Servicing's
Light Brown Apple Moth/Jackson Trap	Fruit Trees	May-Oct	626	7,825
Mediterranean Fruit Fly/Jackson Trap	Fruit Trees	May-Oct	626	7,825
Melon Fruit Fly/Jackson Trap	Vegetable Gardens	May-Oct	351	4,563
Oriental Fruit Fly/Jackson Trap	Fruit Trees	May-Oct	626	7,825
Asian Citrus Psyllid/Yellow Panel Trap	Citrus	Year Round	2,685	25,142
Glassy Winged Sharpshooter (GWSS)/Yellow Panel Trap	Ornamental	May-Oct	626	7,825
GWSS Nursery/ Yellow Panel Trap	Agricultural	May-Oct	2,519	42,823
European Grapevine Moth/Red Delta Trap	Vineyards	Mar-Aug	4,364	54,550
General Fruit Fly/Mexican Fruit Fly/McPhail Trap	Fruit Trees	May-Oct	351	9,126
Gypsy Moth/ Delta Trap	Shade Trees	Jun-Sept	253	1,771
Japanese Beetle/Japanese Beetle Trap	Shade Trees	Jun-Sept	253	1,771



Jackson Trap



McPhail Trap



Gypsy Moth Trap

Direct Marketing

Farmers markets provide an opportunity for farmers to sell fresh produce directly to customers. San Joaquin County Agricultural Commissioner's Office performs inspections of growing grounds, which ensures the vendors selling at the farmer's markets are growing the produce. In 2016, San Joaquin County registered 94 certified producers and currently hosts 7 certified farmers' markets.

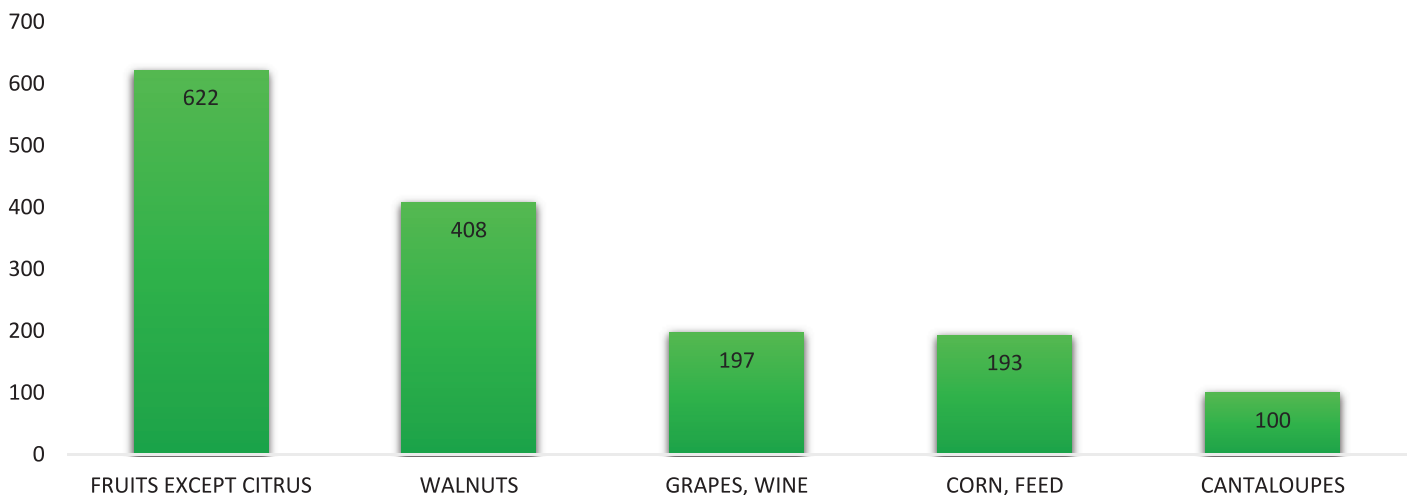
CERTIFIED FARMERS MARKETS

Tuesday		Thursday	
Manteca (May-July)	4:30PM-7:30PM	Lodi (May-Aug)	5:00PM-8:30PM
100 Manteca Ave.		Downtown	
		Stockton (Apr-Nov)	8:00AM-1:00PM
		Claremont Ave. & Yokuts Ave.	
Saturday		Sunday	
Tracy (Apr-Oct)	8:00AM-1:00PM	Stockton (year round)	8:00AM-1:00PM
10 th St & Central Ave.		Claremont Ave & Yokuts Ave.	
Stockton (July-June)	5:00AM-11:00AM	Stockton (May-Oct)	9:00AM-1:00PM
El Dorado St. & Washington St.		Trinity Pkwy & 8 Mile Rd.	

SAN JOAQUIN COUNTY ORGANIC PRODUCTION

San Joaquin County had 47 registered organic producers, 26 organic handlers, and 2 organic processors in 2016. The County had 1,930 certified organic acres growing 85 assorted crops with a gross value of \$34,987,000.

TOP 5 ORGANIC CROPS BY ACREAGE



THE DIVISION OF WEIGHTS & MEASURES

Serving San Joaquin County for over 100 years

The Division of Weights and Measures is mandated by state law to protect the economic interest of all buyers and sellers of every transaction involving the exchange of goods, property, and services. Our mission is to promote equity, protect consumers, and enforce the laws and regulations used to safeguard the economic health of every citizen and competing businesses.

2016 Inspections and Compliance Percentages

DEVICE TYPE	2016 INSPECTIONS	COMPLIANCE PERCENTAGE
Counter Scales	364	98.9
Computing Scales	1702	97.7
Vehicle Scales	347	94
Retail Motor Fuel Dispensers	6556	94.3
Retail Water Meters	140	98.1
Taximeters	28	99



Honeybee Trivia



Bees must go to 2 million flowers to gather enough nectar to produce 1 pound of honey.



Honeybees fly upwards of 55,000 miles to produce 1 pound of honey.



A queen bee can live from 4-7 years.



All worker bees are female and only live 45 days.



Honeybees may forage up to 5 miles from the hive.



Beekeeping dates back at least 4,500 years.



Honeybees are responsible for pollinating about 80% of all fruit, vegetable, and seed crops.



Honey is 80% sugars and 20% water.



The top four honey producing states are North Dakota, South Dakota, Montana and California.



A worker bee will die after she stings, as the barbed stinger remains after stinging.



A queen bee will lay about 1,500 eggs per day.



Drone bees are male bees. They live up to 90 days (twice as long as worker bees).



A foraging honeybee can carry 80% of their weight in pollen or nectar.



GENERAL SAN JOAQUIN COUNTY INFORMATION

County Seat:	Stockton
County Population (2015 Census):	726,106
Population per Square Mile:	492
Incorporated Cities (7):	Escalon, Lathrop, Lodi, Manteca, Ripon, Stockton, Tracy
Land Area (Square Miles):	1,391
Land Area in Farms (Acres – 2012 Census):	787,015
Total Crop Land (Acres – 2012 Census):	517,918
Irrigated Crop Land (Acres – 2012 Census):	485,402
Number of Farms (2012 Census):	3,580
Average Size of Farms (Acres – 2012 Census):	220
Agriculture Work Force (Monthly Average – 2012 Census):	23,037
Lowest Elevation in County (Delta Area):	12' Below Sea Level
Highest Elevation in County (Southwest Hills):	3065' Above Sea Level
Length of County (North to South):	75 Miles
Width of County (East to West):	65 Miles
Average January Temperature (F):	49
Average July Temperature (F):	74
2016 Rainfall:	
North County: 25.0 Inches	South County: 12.9 Inches
East County: 13.2 Inches	West County: 18.5 Inches

A SPECIAL "THANK YOU"

The San Joaquin County Agricultural Commissioner's Office expresses its appreciation to the



and



for their contributions to the 2016 Crop Report. We would also like to thank the San Joaquin County Cooperative Extension for their assistance. Without their support the publication of this report would not be possible.

**AGRICULTURAL COMMISSIONER'S
OFFICE**

SAN JOAQUIN COUNTY
2101 East Earhart Avenue, Suite 100
Stockton, Ca 95206

