

Solano County

2016



Crop and Livestock Report

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**COUNTY AGRICULTURAL COMMISSIONER /
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To: Karen Ross, Secretary
California Department of Food and Agriculture

and

The Honorable Board of Supervisors
County of Solano, California

Pursuant to the provisions of Sections 2279 and 2272 of the California Food and Agricultural Code, I am pleased to present the Solano County Crop and Livestock Report for 2016.

This report is the 67th annual report issued by the Agricultural Commissioner. Although overall production values dropped from last year in the face of a fifth year of statewide drought, farm gate values remained above pre-drought values. It is important to remember that this report lists farm gate values only. Processing capacity allows some growers to add or recapture value, but this report is not a measure of profitability, nor does it account for the re-spending and support multipliers generated by this production in the local economy.

The gross value of Solano County's agricultural production for 2016 was \$347,172,000, representing a decrease from 2015 values by \$6,697,000, or a 1.9% drop. The extended drought and lower meat prices contributed to reduced values in animal production and field crops. The top three crops for Solano County are Walnuts as number one with an increase in value by 18.2% to \$44,822,000, Nursery Products in second rank at \$39,754,000, an increase of 5.6%, and Almonds in third rank with an increase of 52.2% value to \$35,917,000. Tomatoes fell from first to fourth rank losing 19.7% to \$33,843,000. Alfalfa, Cattle and Calves and Wheat also dropped in ranking and value. Conversely, Wine Grapes, Sunflower (Seed) and Sheep and Lambs rose in both rank and value. It should be noted that for 2016, unlike prior years, value calculations for Sheep and Lambs included feeder lamb weight gain while maintained in pasture in Solano County that contributed to the 40% increase in value.

This year's cover story celebrates Solano County's agricultural diversity and spotlights its economic, cultural and historical importance. Each year's crop report provides data that statistically demonstrates how Solano's diversity has supported and maintained a strong and thriving agriculture economy, as some crops rise in value while others fall.

I wish to extend my sincere appreciation to all of the farmers, ranchers, boards, commissions, and agencies who contributed vital data to make this report possible. I also thank Michael Duncan for his efforts as our crop report editor and my staff for their dedication and efforts in compiling and producing this report.

To see this or any of the previous crop reports online or to learn about the programs and services provided by the Solano County Department of Agriculture and Weights and Measures, please visit at www.solanocounty.com/ag.

Respectfully submitted,

Jim Allan
Agricultural Commissioner/Sealer of Weights and Measures

A Diverse and Thriving Agriculture

This year's Annual Crop Report celebrates the diversity of Solano County Agriculture. Using numerous metrics, our county has been recognized as being the second most diverse county in California; this distinction applies to our agriculture as well. We grow more than eighty different crops. Our growers come from many different backgrounds. Our soils, weather and resources differentiate various parts of the county making each one ideal for a different crop mix. Just as having a diversified investment portfolio can help maintain value during times of fluctuation, a diverse agricultural system supports a strong agricultural economy in changing times. Land use policy decisions in Solano County have further supported the continued variability in our systems, although forces outside of the county threaten to mar key facets in our gem.

Many of my colleague commissioners wake up every morning knowing what their number one crop will be in the next year. Solano County has six contenders for that position. Our leading crops differ across broad categories, including Nursery Products, Seed Crops, Vegetable Row Crops, Fruits and Nuts, Livestock, and Field Crops each have at least one placement in the top ten. The decisions growers make on what to plant are largely financial ones. Availability of markets, processing, transportation corridors and inputs are all part of the calculus. Sugar Beets were once the second highest grossing crop in the county. As sugar mills began to shut down in the late 1990s, production dropped rapidly to the point where there were no beets being planted at all, down from 19,000 acres in 1987, to 11,000 in 1998 and then none at all in 2001. For many local economies, this loss would have been catastrophic, but the array of planting alternatives available in Solano County allowed the Ag industry to show great resiliency.

Our farming community is also diverse. In every part of the county, we have legacy farm families that have been here for generations. Some of their ancestors bought portions of former Spanish land grants during the gold rush era. We also have young men and women entering farming for the first time. Many of our newer growers plant for Community Supported Agriculture (CSA) subscribers, while others take their seasonal harvests to local farmer's markets. The Center for Land-Based Learning in the Dixon Ridge area gives aspiring farmers the skills and experience needed to enter the industry. Some of our new growers are recent veterans from foreign conflicts and some are new graduates from nearby University of California (UC) Davis. Our producers also represent many ethnic and cultural communities bringing traditional techniques and access to specialty markets to the industry.

Different crops require specific growing conditions to optimize quality and value. The 2008 Ag Futures Study commissioned from the UC Davis Ag Issues Center, identified ten production regions within the county. Each has a unique combination of soil, weather patterns and water infrastructure. These regions were recognized in the County General Plan for their specific contributions and needs. Two of the county regions, Suisun and Green Valley, are congressionally recognized American Viticultural Areas (AVA's) for the unique terroir each provides for the grapes grown there. An agricultural economic study completed this year assigned Solano County the second highest diversity index. Only Monterey, a county with an annual production exceeding \$4 billion, had a higher diversity score.

Farming needs space and isolation to grow crops without interference. Slow-growth measures approved by voters long ago and implemented by policy makers through the General Plan have assured a stable ag-urban interface that has mitigated conflict. Unfortunately, outside interests have identified Solano's agricultural open space as low-hanging fruit to mitigate for statewide water export projects. Hopefully, our agriculture systems will find a way to coexist with coming changes to the agricultural landscape.

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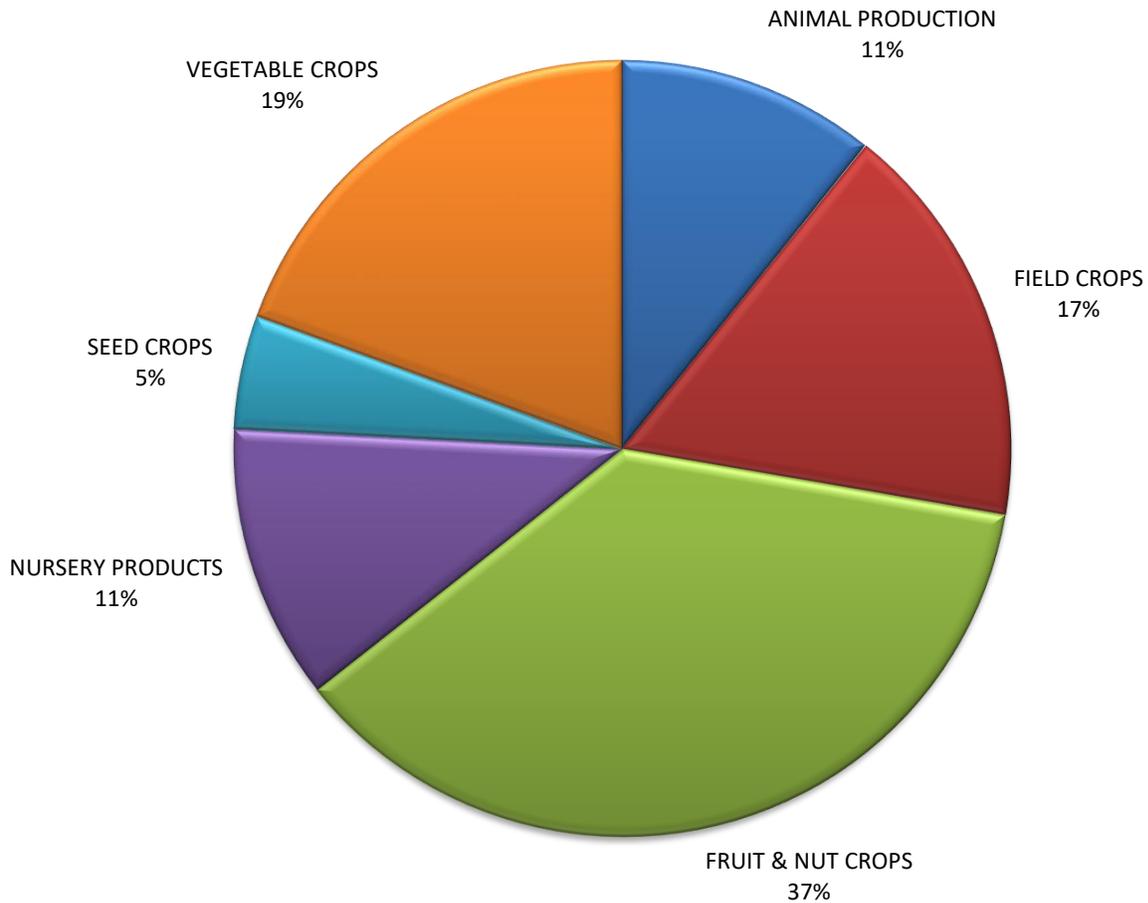
Sharon Garrett
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Limited Term

Edward Duree

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2016 Value by Crop Group



Value Summary

YEAR	ANIMAL PRODUCTION ¹	FIELD CROPS	FRUIT & NUT CROPS	NURSERY PRODUCTS	SEED CROPS	VEGETABLE CROPS	TOTAL VALUE
2006	47,852,000	46,946,000	39,964,000	47,856,000	9,988,000	40,899,000	\$233,505,000
2007	54,820,000	54,812,000	43,430,000	56,611,000	10,821,000	47,762,000	\$268,256,000
2008	49,873,000	89,365,000	44,037,000	43,056,000	10,828,000	55,624,000	\$292,783,000
2009	40,116,000	50,073,000	48,191,000	33,499,000	15,859,000	64,184,000	\$251,922,000
2010	46,011,000	57,072,000	54,874,000	23,352,000	14,391,000	63,698,000	\$259,398,000
2011	52,458,000	83,812,000	63,420,000	23,630,000	14,671,000	53,668,000	\$291,659,000
2012	63,425,000	84,604,000	87,368,000	32,707,000	17,680,000	56,911,000	\$342,695,000
2013	51,340,000	88,744,000	97,150,000	35,144,000	16,628,000	59,209,000	\$348,215,000
2014	62,387,000	98,672,000	86,624,000	35,594,000	16,900,000	78,468,000	\$378,645,000
2015	57,277,000	78,454,000	87,741,000	37,648,000	11,729,000	81,020,000	\$353,869,000
2016	37,259,000	59,006,000	127,228,000	39,754,000	16,478,000	67,447,000	\$347,172,000

¹Includes livestock and poultry, livestock and poultry products, and apiary production.



* Image sizes in chart are proportionate to 2016 Crop Value Amount

Top Ten Million Dollar Commodities

CROP	2016 CROP VALUE	2016 CROP RANKING	2015 CROP RANKING
Walnuts	44,822,000	1	2
Nursery Products	39,754,000	2	3
Almonds	35,917,000	3	6
Tomatoes (Processing)	33,843,000	4	1
Alfalfa (Hay)	22,267,000	5	4
Grapes (Wine)	19,560,000	6	7
Sunflower (Seed)	11,414,000	7	9
Sheep & Lambs	9,339,000	8	10
Cattle & Calves	9,192,000	9	5
Wheat	7,428,000	10	8



Fruit & Nut Crops

CROP	YEAR	BEARING ACRES	PRODUCTION		UNIT	VALUE			
			PER ACRE	TOTAL		PER UNIT	TOTAL	% CHANGE	
Almonds (Meats)	2016	9,000	0.89	8,020	Ton	4,480	35,917,000	52%	
	2015	6,880	0.65	4,470	Ton	5,300	23,603,000		
Grapes (Wine)¹	Dark Varieties	2016	-	-	11,300	Ton	910	10,318,000	33%
		2015	-	-	7,660	Ton	1,010	7,737,000	
	White Varieties	2016	-	-	12,500	Ton	737	9,242,000	27%
		2015	-	-	10,270	Ton	706	7,251,000	
	Total Grapes	2016	4,110	5.79	23,800	Ton	-	19,560,000	31%
		2015	4,440	4.04	17,930	Ton	-	14,988,000	
Olives²	2016	170	1.63	277	Ton	2,370	656,000	4%	
	2015	180	1.37	247	Ton	2,560	631,000		
Prunes (Dried)	2016	1,190	1.46	1,740	Ton	1,920	3,336,000	-41%	
	2015	893	2.56	2,286	Ton	2,470	5,647,000		
Walnuts	2016	11,400	1.84	20,900	Ton	2,140	44,822,000	18%	
	2015	10,510	1.50	15,800	Ton	2,400	37,912,000		
Miscellaneous³	2016	1,090	-	-	-	-	3,377,000	-32%	
	2015	1,190	-	-	-	-	4,960,000		
TOTAL FRUIT & NUT CROPS	2016	26,800					\$127,228,000	45%	
	2015	24,093					\$87,741,000		

Figures may not add due to rounding.

¹Includes acreage not harvested or sold.

²Value per unit based on oil value.

³Includes almond hulls, apples, apricots, blackberries, cherries, citrus, figs, grapes (table), kiwi, nectarines, peaches, pears, persimmons, pistachios, plums, pomegranates, and strawberries.



Field & Forage Crops

CROP	YEAR	HARVESTED ACRES	PRODUCTION		UNIT	VALUE		
			PER ACRE	TOTAL		PER UNIT	TOTAL	% CHANGE
Beans, Dry	2016	2,430	1.12	2,720	Ton	1,209.00	3,284,000	-1%
	2015	2,850	1.09	3,110	Ton	1,100.00	3,332,000	
Corn (Grain)	2016	4,410	4.72	20,800	Ton	156.73	3,262,000	-24%
	2015	4,540	5.06	23,000	Ton	186.00	4,269,000	
Hay Alfalfa	2016	30,500	5.24	160,000	Ton	139.28	22,267,000	-36%
	2015	31,270	6.01	188,000	Ton	185.00	34,821,000	
Grain	2016	4,650	3.71	17,300	Ton	95.97	1,657,000	87%
	2015	2,150	3.34	7,160	Ton	124.00	885,000	
Ryegrass	2016	4,610	2.50	11,500	Ton	70.01	807,000	-70%
	2015	7,230	3.35	24,200	Ton	110.00	2,666,000	
Sudangrass	2016	4,550	2.50	11,375	Ton	143.58	2,417,000	-35%
	2015	6,330	3.85	24,400	Ton	152.00	3,705,000	
Grass/Forage ¹	2016	3,620	3.50	12,700	Ton	117.83	1,491,000	11%
	2015	2,580	3.17	8,180	Ton	165.00	1,348,000	
Pasture, Irrigated ²	2016	21,600	-	-	Acre	115.83	2,498,000	-38%
	2015	31,600	-	-	Acre	128.00	4,046,000	
Pasture, Rangeland ³	2016	189,000	-	-	Acre	21.34	4,035,000	1%
	2015	178,000	-	-	Acre	22.00	4,012,000	
Safflower	2016	2,980	1.12	3,340	Ton	431.00	1,438,000	42%
	2015	1,630	1.20	1,960	Ton	517.00	1,013,000	
Triticale	2016	6,060	2.58	15,600	Ton	136.40	2,134,000	-41%
	2015	9,170	2.16	19,800	Ton	184.00	3,647,000	
Wheat ⁴	2016	19,400	2.61	50,600	Ton	146.86	7,428,000	-18%
	2015	17,750	2.78	49,400	Ton	184.00	9,092,000	
Miscellaneous ⁵	2016	5,810	-	-	-	-	6,289,000	12%
	2015	5,130	-	-	-	-	5,618,000	
TOTAL FIELD CROPS	2016	300,000					\$59,006,000	-25%
	2015	300,230					\$78,454,000	

Figures may not add due to rounding.

¹Previously reported as Other.

²Acreage from the 2016 permit data.

³Acreage calculated using data from the California Department of Conservation 2012-2014 Land Use Conversion Report.

⁴Includes irrigated and dryland wheat.

⁵Includes barley, corn silage, safflower grain, straw and sunflower oil.



Apiary Production

ITEM	YEAR	PRODUCTION	UNIT	VALUE		
				PER UNIT	TOTAL	% CHANGE
Apiary Products ¹	2016	-	-	-	687,000	0%
	2015	-	-	-	687,000	
Pollination ²	2016	14,000	Colony	113.00	1,579,000	-4%
	2015	20,130	Colony	81.94	1,650,000	
TOTAL APIARY	2016				\$2,266,000	-3%
PRODUCTION	2015				\$2,337,000	

Figures may not add due to rounding.

¹Apiary products includes beeswax, honey, honeycomb, packaged bees, and queen bees.

²Value based on acreage of crops requiring bees for pollination and number of colonies required for adequate pollination. Colony fee varies by crop. Crops pollinated include almond, asparagus, cherry, kiwi, prune, sunflower, and vine seed.



Nursery Products

ITEM	YEAR	ACREAGE	TOTAL VALUE	% CHANGE
Nursery Stock ¹	2016	1,970	36,373,000	9%
	2015	1,930	33,455,000	
Propagative Stock ²	2016	136	3,381,000	-19%
	2015	224	4,193,000	
TOTAL NURSERY	2016	1,440	\$39,754,000	6%
PRODUCTS	2015	2,150	\$37,648,000	

Figures may not add due to rounding.

¹Includes christmas trees, cut flowers, greenhouse plants, herbaceous and woody ornamentals, and turf.

²Includes grafted grapevines, grapevine rootstock, and grapevine cuttings.



Vegetable Crops

CROP	YEAR	HARVESTED ACRES	PRODUCTION		UNIT	VALUE			
			PER ACRE	TOTAL		PER UNIT	TOTAL	% CHANGE	
Tomatoes (Processing)	2016	10,400	46.43	455,000	Ton	74.38	33,843,000	-20%	
	2015	11,800	44.42	524,000	Ton	80.44	42,156,000		
Misc. Vegetables	Processing¹	2016	1,280	-	-	-	-	6,204,000	-18%
		2015	1,350	-	-	-	-	7,532,000	
	Fresh²	2016	1,900	-	-	-	-	27,538,000	-12%
		2015	1,470	-	-	-	-	31,332,000	
TOTAL VEGETABLE CROPS	2016	13,500					\$67,447,000	-17%	
	2015	14,620					\$81,020,000		

Figures may not add due to rounding.

¹Includes cucumbers (pickling), garlic, and peppers.

²Includes beans, brassicas, cucumber, endive, garlic, herbs, leafy greens, melons, mushrooms, onions, peas, peppers, pumpkins, root vegetables, salad greens, sprouts, squash, sweet corn, tomatoes, tubers, and watermelon.



Seed Crops

CROP	YEAR	HARVESTED ACRES	PRODUCTION		UNIT	VALUE		
			PER ACRE	TOTAL		PER UNIT	TOTAL	% CHANGE
Sunflower	2016	7,920	1,540	12,200,000	Lb	0.94	11,414,000	65%
	2015	4,720	1,190	5,600,000	Lb	1.23	6,904,000	
Watermelon ¹	2016	-	-	-	Lb	-	-	
	2015	309	405	125,000	Lb	4.74	594,000	
Cucumber ²	2016	140	284	39,900	Lb	5	218,000	
	2015	-	-	-	-	-	-	
Squash ¹	2016	-	-	-	Lb	-	-	
	2015	155	295	45,750	Lb	25	1,160,000	
Miscellaneous ³	2016	1,030	-	-	-	-	4,846,000	58%
	2015	619	-	-	-	-	3,071,000	
TOTAL SEED CROPS	2016	9,090					\$16,478,000	40%
	2015	5,803					\$11,729,000	

Figures may not add due to rounding.

¹Watermelon and squash have been added to Miscellaneous.

²Cucumber has been removed from Miscellaneous.

³Includes asparagus, bean, cabbage, carrot, onion, and wheat.

Livestock & Poultry

ITEM	YEAR	NUMBER OF HEAD	TOTAL LIVEWEIGHT	UNIT	VALUE		
					PER UNIT	TOTAL	% CHANGE
Cattle & Calves ¹	2016	23,400	106,685	Cwt	96.50	9,192,000	-67%
	2015	25,000	131,219	Cwt	210.00	27,556,000	
Sheep & Lambs ²	2016	59,000	66,704	Cwt		9,339,000	40%
	2015	29,700	41,259	Cwt	162.00	6,684,000	
Miscellaneous ³	2016	1,150,000	-	-	-	1,074,000	-39%
	2015	-	-	-	-	1,773,000	
TOTAL LIVESTOCK & POULTRY	2016					\$19,605,000	-46%
	2015					\$36,013,000	

Figures may not add due to rounding.

¹Includes beef stocker gain, dairy calves, dairy yearlings, dairy replacement heifers, and dairy cull cows.

²Includes feeder lamb gain.

³Includes goats, hogs, and poultry (chickens, doves, geese, and turkeys).



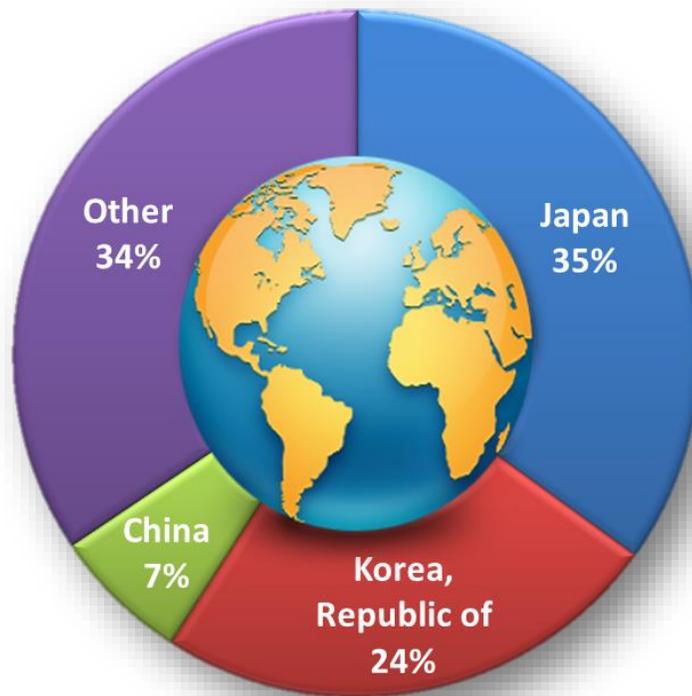
Livestock & Poultry Products

ITEM	YEAR	PRODUCTION	UNIT	VALUE		
				PER UNIT	TOTAL	% CHANGE
Eggs, Chicken	2016	113,000	Dozen	3.82	432,000	-5%
	2015	144,000	Dozen	3.14	453,000	
Wool	2016	198,000	Lb	1.62	321,000	221%
	2015	213,000	Lb	0.47	100,110	
Miscellaneous ⁴	2016	-	-	-	14,635,000	-20%
	2015	-	-	-	18,374,000	
TOTAL LIVESTOCK & POULTRY PRODUCTS	2016				\$15,388,000	-19%
	2015				\$18,927,110	

Figures may not add due to rounding.

⁴Includes alpaca fiber, goat milk, and market milk.

Solano County Export Market



In 2016, the Solano County Agricultural Department issued 1096 phytosanitary certificates for commodities bound for export markets in 38 countries

Argentina
Australia
Brazil
Canada
Chile
China
Colombia
Dominican Republic
Egypt
Fiji
Germany

Hong Kong
India
Indonesia
Israel
Italy
Japan
Korea, Republic of
Kuwait
Latvia
Malaysia
Mexico

Netherlands
New Zealand
Panama
Peru
Philippines
Poland
Saudi Arabia
Singapore
Spain
Taiwan
Thailand

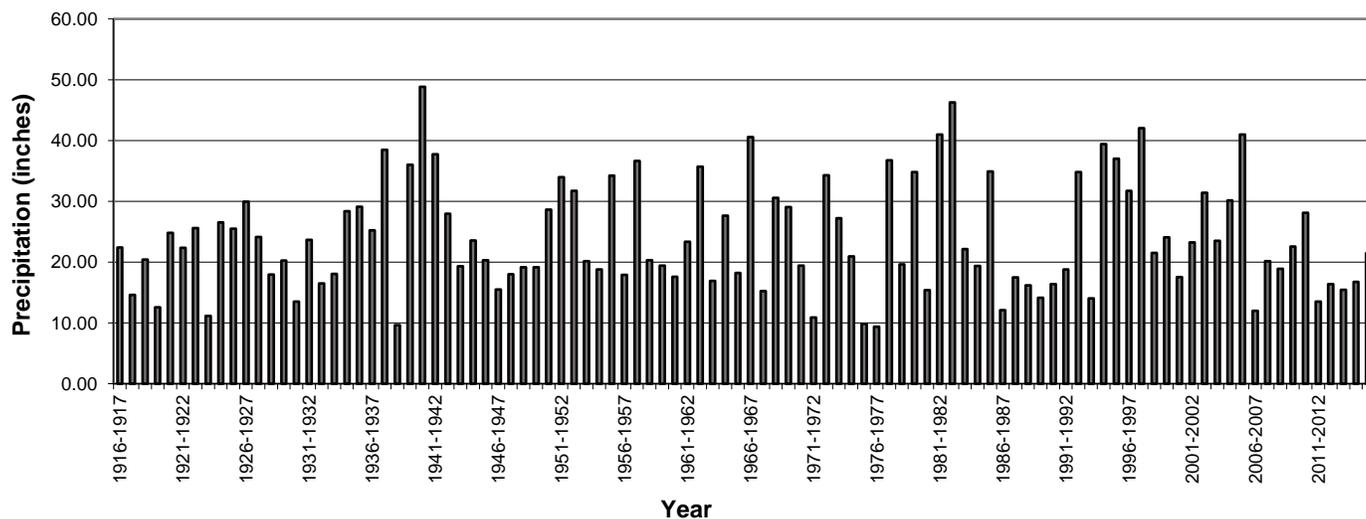
Uganda
United Arab Emirates
United Kingdom
Uruguay
Viet Nam

100 Years of Annual Precipitation at Vacaville, CA

YEAR	INCHES	YEAR	INCHES	YEAR	INCHES	YEAR	INCHES
1916-1917	22.40	1941-1942	37.72	1966-1967	40.54	1991-1992	18.77
1917-1918	14.61	1942-1943	27.94	1967-1968	15.26	1992-1993	34.79
1918-1919	20.41	1943-1944	19.33	1968-1969	30.56	1993-1994	14.01
1919-1920	12.58	1944-1945	23.55	1969-1970	29.07	1994-1995	39.43
1920-1921	24.79	1945-1946	20.32	1970-1971	19.42	1995-1996	36.99
1921-1922	22.34	1946-1947	15.47	1971-1972	10.89	1996-1997	31.74
1922-1923	25.62	1947-1948	17.99	1972-1973	34.30	1997-1998	42.01
1923-1924	11.15	1948-1949	19.15	1973-1974	27.23	1998-1999	21.52
1924-1925	26.53	1949-1950	19.16	1974-1975	20.93	1999-2000	24.09
1925-1926	25.48	1950-1951	28.61	1975-1976	9.84	2000-2001	17.56
1926-1927	29.96	1951-1952	33.99	1976-1977	9.38	2001-2002	23.24
1927-1928	24.14	1952-1953	31.72	1977-1978	36.75	2002-2003	31.42
1928-1929	17.98	1953-1954	20.17	1978-1979	19.64	2003-2004	23.49
1929-1930	20.26	1954-1955	18.81	1979-1980	34.79	2004-2005	30.14
1930-1931	13.49	1955-1956	34.24	1980-1981	15.39	2005-2006	40.98
1931-1932	23.64	1956-1957	17.90	1981-1982	41.00	2006-2007	12.01
1932-1933	16.50	1957-1958	36.64	1982-1983	46.26	2007-2008	20.17
1933-1934	18.06	1958-1959	20.30	1983-1984	22.12	2008-2009	18.89
1934-1935	28.35	1959-1960	19.40	1984-1985	19.37	2009-2010	22.55
1935-1936	29.12	1960-1961	17.58	1985-1986	34.89	2010-2011	28.12
1936-1937	25.22	1961-1962	23.36	1986-1987	12.09	2011-2012	13.53
1937-1938	38.46	1962-1963	35.71	1987-1988	17.48	2012-2013	16.39
1938-1939	9.64	1963-1964	16.93	1988-1989	16.15	2013-2014	15.42
1939-1940	36.02	1964-1965	27.63	1989-1990	14.12	2014-2015	16.74
1940-1941	48.82	1965-1966	18.24	1990-1991	16.36	2015-2016	21.47

The average annual precipitation over the 100 year period from October 1, 1916 to September 30, 2016 is 23.97 inches.

Annual Precipitation (Vacaville, CA)



Annual Precipitation is from October 1 to September 30

Source: NOAA National Climatic Data Center

Sustainable Agriculture – 2016 Highlights

Pest Prevention

The California Food and Agricultural Code mandates pest prevention programs to prevent the introduction and spread of pests in California. Pest prevention involves Pest Exclusion, Pest Detection, Pierce's Disease Control, and the State Export Certification Program.

Pest Exclusion is the first line of defense to prevent detrimental, non-native pests from entering the county.

A total of 147 premise visits occurred at shipping terminals, nurseries, and residences in 2016. During these visits 911 shipments of plant material, seed, and household goods were inspected. Eleven shipments were rejected for live pests, material not properly certified, or improper container markings. Rejected plant material is returned to the shipper, reconditioned and released, or destroyed.

Department personnel inspected 17 production nurseries, comprising 1,945 acres, for pests and diseases. These nurseries produce a variety of nursery stock, including ornamental plants, sod (turfgrass), vegetable plants, and fruit trees, for sale within California as well as to other states and North American countries.

The **Pierce's Disease Control Program** works to prevent the spread of the Glassy-winged Sharpshooter (GWSS) into Solano County, which is the main insect vector of Pierce's Disease. Department personnel inspected 595 shipments of nursery stock arriving from infested counties in California.

Pest Detection is Solano County's second line of defense against the introduction and spread of insect pests. Insect traps are placed and monitored to detect whether a pest is present in a particular location. In 2016, 29,075 trap inspections were conducted.

Pest Detection Trapping			
TARGET PEST	HOSTS	# OF TRAPS	# OF TRAP SERVICINGS
ASIAN CITRUS PSYLLID (<i>Diaphorina citri</i>)	Ornamental & nursery plants	385	1,198
APPLE MAGGOT (<i>Rhagoletis pomonella</i>)	Fruit trees	47	304
EUROPEAN GRAPEVINE MOTH (<i>Lobesia botrana</i>)	Vineyards	480	6,411
GLASSY-WINGED SHARPSHOOTER (<i>Homalodisca vitripennis</i>)	Nursery & urban landscape plants	806	9,781
GYPSY MOTH (<i>Lymantria dispar</i>)	Shade trees	240	1,570
JAPANESE BEETLE (<i>Popillia japonica</i>)	Turf & roses	207	1,305
LIGHT BROWN APPLE MOTH (<i>Epiphyas postvittana</i>)	Nursery & urban ornamental plants	214	1,893
MEDITERRANEAN FRUIT FLY (<i>Ceratitis capitata</i>)	Fruit trees	231	2,330
MELON FLY (<i>Bactrocera cucurbitae</i>)	Vegetable gardens	88	1,270
ORIENTAL FRUIT FLY (<i>Bactrocera dorsalis</i>)	Fruit trees	86	846
OTHER FRUIT FLIES (McPhail traps)	Fruit trees & vegetables	88	2,167

Pests Found via Detection Trapping



Mediterranean Fruit Fly (*Ceratitis capitata*)

Found October 13, 2016, Vacaville, CA



Asian Citrus Psyllid (*Diaphorina citri*)

Found November 14, 2016, Fairfield, CA

Sustainable Agriculture – 2016 Highlights

The **Phytosanitary Certification Program** ensures that plants and plant commodities exported to other states or foreign countries from Solano County are free from injurious pests. Solano County staff performed 401 Phytosanitary Field Inspections on 4,515 acres of seed crops. A total of 1,650 Phytosanitary Certificates for plant commodities exported to international and interstate destinations, and consisting of 1,096 Federal Certificates for international exports and 554 California State Certificates for interstate shipments.

The **Sudden Oak Death** program works to prevent the spread of Sudden Oak Death, the disease caused by the pathogen *Phytophthora ramorum*. Department personnel conducted 61 inspections at 5 production shipping nurseries, and found zero incidences of Sudden Oak Death.

Pest Eradication

The primary objective of the Pest Eradication Program is to quickly and efficiently eliminate infestations of serious agricultural pests with limited distribution before they are able to establish and spread in California.

Egyptian Broomrape (*Orobanche aegyptiaca*) is a parasitic plant that infects many economically important crops, such as tomato, sunflower, bell pepper, carrot, and various legumes. It is a major problem in the Middle East and Eastern Europe.

The first U.S. detection of Egyptian Broomrape was found in a processing tomato field in Solano County in July 2014. Since then, mitigation, monitoring and eradication efforts have resulted in the field being declared eradicated in August 2016.

A processing tomato field neighboring the initial detection was found to have Egyptian Broomrape in August 2016. The newly identified field has been placed on hold and is

undergoing similar processes as the initial Egyptian Broomrape detection field, which includes herbicide treatment and burning of the infected host crop followed by methyl bromide fumigation treatment of the field and at least three plantings of trap crops. Solano County Agriculture Department and California Department of Food and Agriculture staff cooperatively monitor all eradication efforts of this parasitic plant pest.

Organic Farming

Solano County had 41 organic farms registered for organic production. These growers farmed a total of 2,009 acres to produce assorted organic berries, herbs, fruits, vegetables, microgreens, nuts, cut flowers, and olive oil. In addition, Solano County had over 5,002 acres of organic ryegrass, pastureland and rangeland. Organic eggs and poultry were also produced.



Certified Farmers Markets

The purpose of farmers' markets is to allow producers of agricultural commodities to sell directly to the public. Anyone who wishes to sell at a farmers' market must obtain a Certified Producers Certificate from the Agricultural Commissioner in the county where the produce was grown. Solano County certificates were issued to 34 producers in 2016, and six farmers' markets were certified by the Agricultural Commissioner to market local and regional produce in Solano County.

WEIGHTS & MEASURES DIVISION

Ever wonder how your Water, Electric, or Vapor (Gas) meter is tested? Residential meters are regulated by the Public Utilities Commission. However, meters used in sub-metering applications like mobile home parks or some apartment complexes fall under the county Weights and Measures jurisdiction which is the local regulatory authority for sub-metered devices within Solano County.



Water Bench

There are different methods for testing water, vapor, and electric meters. Water meters are tested on what is called a “Water Bench”. Meters are loaded into the machine, then water is pumped through to purge air from the meters. Initial readings are taken, then water is pumped through the meters at a specific flow rate. The water is collected in a calibrated container. Once filled to the required volume, a final reading is taken from each meter and the percent error is calculated.

Vapor meters are first pressurized then submerged in a tub of water to test for leaks. After passing the leak test, meters are placed in a temperature controlled lab to stabilize. Once stabilized the meters are connected to a “Bell Prover” that pushes an exact volume of air through the meter. Start and end readings are taken and percent error is calculated.



Vapor Lab



Electric Test Bench

Electric meters are also tested in a lab on a “Test Bench”. The meters are inserted into the test socket and then connected to an automatic testing computer. The computer runs a program to test the meter and calculates percent error.

Weights and Measures inspects approximately 10% of the sub-meter inventory each year. Also inspected are any new meters and meters that are suspected of failing to read correctly. Weights and Measures also investigates sub-meter billing and meter complaints.

Solano County currently has 672 registered establishments with various commercial devices as shown below:

Fabric/Cordage/Wire Meters	38	Computing Scales	871
LPG (Propane) Meters	52	Counter Scales	142
Misc. Measuring Devices	10	Livestock Scales	20
Odometers	84	Crane Scales	3
Retail Motor Fuel Meters	4,249	Portable Platform Scales	58
Retail Water Meters	55	Hanging Scales	7
Taxi Meters	63	Hopper/Tank Scales	16
Elec., Vapor, Water Sub-Meters	10,551	Monorail Meat Beam	3
Vehicle Meters	28	Vehicle & Railway Scales	59
Wholesale Meters	44	Dormant Scales	46

The Solano County Weights & Measures Division in cooperation with the other 57 counties and the California Division of Measurement Standards promotes fair trade practices throughout California.

GENERAL INFORMATION

POPULATION¹

Solano County Population: 430,972

Benicia 27,574	Dixon 19,065	Fairfield 112,255	Rio Vista 8,623
Suisun City 29,168	Vacaville 96,946	Vallejo 117,629	Unincorporated 19,712

AREA

Land Area (Square Miles) ²	909.95	Urban and Built Up Land Area (Acres) ²	60,488
Land Area (Acres) ²	582,370	Land Area in Farms (Acres) ³	407,101
Water Area (Square Miles) ²	84.61	Total Cropland (Acres) ³	169,637
Water Area (Acres) ²	54,153	Irrigated Cropland (Acres) ³	130,909

FARMS

Average US Size (Acres) ³	434	Number of Farms in Solano County ³	860
Average California Size (Acres) ³	328	Full Time	462
Average Solano County Size (Acres) ³	473	Part Time	398

STATE RANKING

County Rank by Gross Value of Agricultural Production (2015)⁴

27th

Commodity Rank by Gross Value of Production (2015)⁴

	1st - Triticale	3rd - Wool	
4th - Sudan Hay	4th - Sunflower (Seed)		5th - Sheep & Lamb

FARMING REGIONS

Dixon Ridge	Jepson Prairie	Suisun Valley
Elmira/Maine Prairie	Montezuma Hills	Western Hills
Green Valley	Pleasants/Vaca/Lagoon Valleys	Winters
	Ryer Island	

LOCAL ASSESSED PROPERTY VALUES (2016)⁵

\$49.2 Billion

TRANSPORTATION

Total Maintained County Road Miles

577

Major Roadways

Interstates 80, 505, 680, and 780
State Routes 12, 29, 37, 84, 113, and 220

¹Source: California Department of Finance, E-1: City/County Population Estimates as of January 1, 2017

²Source: California Department of Conservation 2014 Land Use Conversion

³Source: USDA National Agricultural Statistics Service 2012 Census of Agriculture

⁴Source: CDFA California Agricultural Statistics California County Agricultural Commissioners' Reports 2015

⁵Source: 2016 Solano County Annual Report