

# Solano County



Crop and Livestock Report  
2012

# WALNUTS IN SOLANO COUNTY

This year's featured crop is Walnuts. For the second year in a row, Walnuts are Solano County's number one commodity. Increased acreage and favorable pricing in world markets have raised Walnuts to their current position. We expect to see continued increases in overall value because many new plantings of Walnuts have not yet reached full production. Two graphs may be found within the cover of this report showing the increasing trends for Walnut value and acreage in Solano County. Walnut trees can take seven to ten years to reach maturity, and when planted at traditional densities, can produce for more than 75 years.

Before European settlement, native populations made use of the wild California Black Walnut, which remains plentiful within our rolling woodlands. The Black Walnut is still used as a rootstock for the Persian or English Walnuts grown today. Those Black Walnut rootstocks occasionally form burls that are highly prized for making rich veneers.

The commercial walnuts grown today had their origins in the Middle East. Walnuts were highly valued as both a food and as a fertility symbol by early civilizations. Each of the gods had a favored plant or foodstuff associated with them; Olives, last years featured crop were linked to Athena and Walnuts were the powerful god Jupiter's chosen symbol.

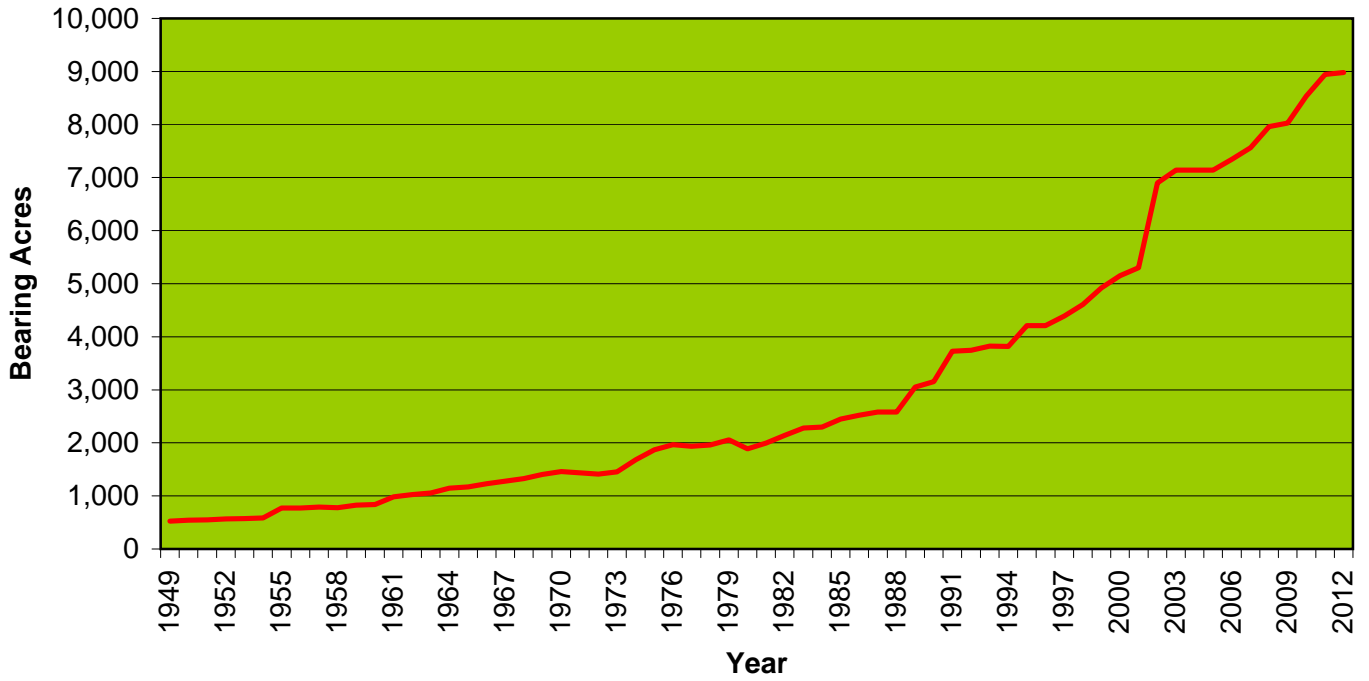
There are many modern varieties of Walnuts, each distinguished by size, shape, harvest date and taste. Chandler and Hartley are the most prevalent in Solano County, but growers also cultivate the Paine, Eureka, Vina, Frankquette and others. Walnuts mature within a green husk as shown on our cover photo. They are knocked from the trees with mechanical shakers, raked into windrows and then picked up from the orchard floor for processing. They then have any adherent husk removed and are dried and graded. The nuts may then be cracked out or have their exterior shells cleaned for sale as in-shell nuts.

Walnuts may be eaten plain, roasted or glazed. They are used in trail mixes, confections, salads and many other preparations. Many health benefits have been attributed to Walnut consumption. They are a rich source of antioxidants and contain healthy oils. Worldwide demand has been increasing for walnuts and they are an important export for Solano County and California. Valuable by-products from Walnuts include walnut oil and the shells which may be used for energy cogeneration and when ground up, as an abrasive for cleaning delicate metal parts and jet turbines.

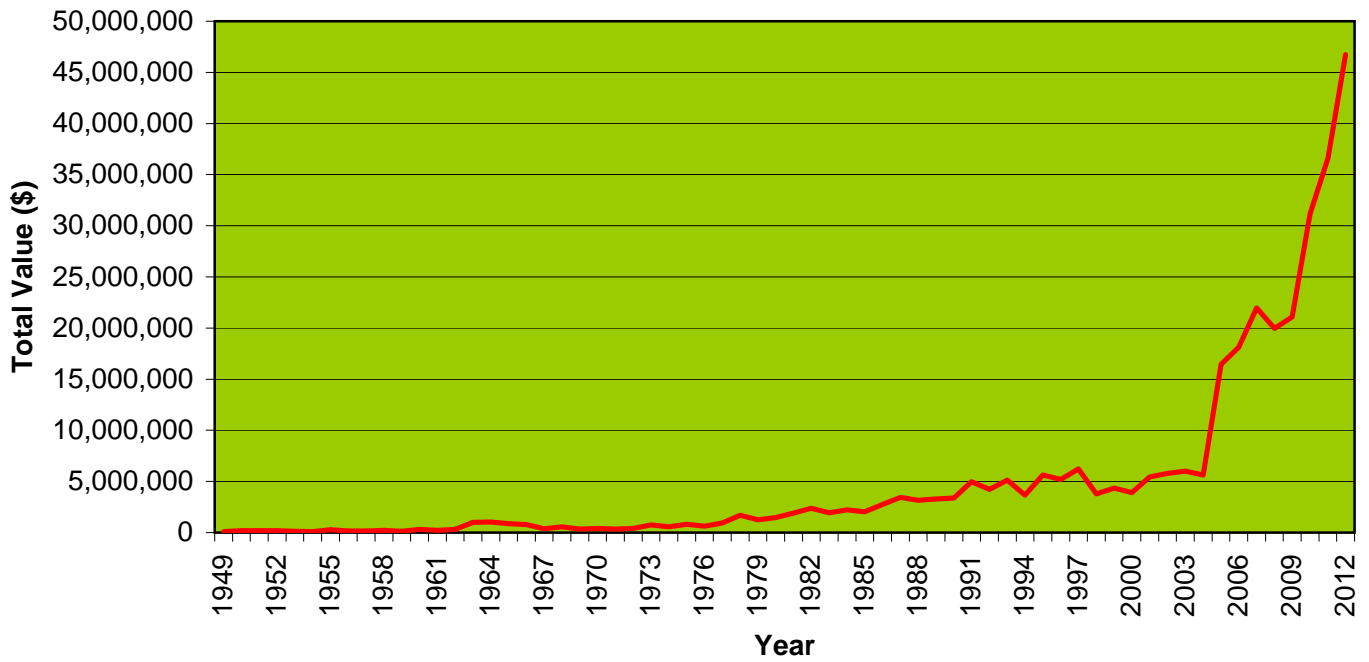
Pests of Walnuts include Coddling Moth, Navel Orange Worm, Husk Fly and Blight. Growers have found innovative ways to fight these pests using both conventional and organic technologies. Most growers in Solano County utilize sustainable, Integrated Pest Management strategies, and we have a large contingent of Organic producers.

We are proud to celebrate Walnuts as this years featured Solano County crop!

### Solano County Walnut Acreage



### Total Gross Value of Walnut Production in Solano County





**SOLANO COUNTY  
BOARD OF SUPERVISORS**

Erin Hannigan, District 1  
Linda Seifert, Chair, District 2  
Jim Spering, District 3  
John Vasquez, District 4  
Skip Thomson, Vice-Chair, District 5

**COUNTY ADMINISTRATIVE  
OFFICER**

Birgitta E. Corsello

**DEPARTMENT OF AGRICULTURE  
STAFF**

**Agricultural Commissioner/  
Sealer of Weights & Measures**

Jim Allan

**Assistant Agricultural Commissioner/  
Sealer of Weights & Measures**

Simone Hardy

**Deputy Agricultural Commissioner/  
Sealer of Weights & Measures**

Linda Pinfold  
Dave Singh

**Senior Agricultural Biologist/Weights & Measures Inspectors**

Manny Devera  
Oliver Hardwick  
Johnnie Johnson  
Thea Nohaft  
Steve Paris  
Andrina Quan  
Dave Schroeder  
Shirley Tavare  
Laura Tripp

**Agricultural Biologist/Weights & Measures Inspectors**

Mark Daniels, Jr.

**Accounting Technician**

Dan Peterson

**Office Assistants**

Sandra Culbertson  
Sharon Garrett  
Suki LaForge  
Marie Renaud

# SOLANO COUNTY GENERAL INFORMATION

## POPULATION<sup>1</sup>

County Population: 418,387

<b>Benicia</b> 27,163	<b>Dixon</b> 18,449	<b>Fairfield</b> 108,207	<b>Rio Vista</b> 7,599
<b>Suisun City</b> 28,234	<b>Vacaville</b> 92,677	<b>Vallejo</b> 117,112	<b>Unincorporated</b> 18,946

## AREA

Land Area (Square Miles) <sup>2</sup>	826.42	Urban and Built Up Land Area (Acres) <sup>2</sup>	59,591
Land Area (Acres) <sup>2</sup>	528,911	Land Area in Farms (Acres) <sup>3</sup>	358,225
Water Area (Square Miles) <sup>2</sup>	83.53	Total Cropland (Acres) <sup>3</sup>	154,937
Water Area (Acres) <sup>2</sup>	53,462	Irrigated Cropland (Acres) <sup>3</sup>	145,988

## FARMS

Average US Size (Acres) <sup>4</sup>	421	Number of Farms in Solano County <sup>3</sup>	890
Average California Size (Acres) <sup>4</sup>	316	Full Time	470
Average Solano County Size (Acres) <sup>3</sup>	403	Part Time	420

## STATE RANKING (2011)<sup>5</sup>

### County Rank by Gross Value of Agricultural Production

26th

### Commodity Rank by Gross Value of Production

3rd - Safflower	2nd - Sudan Hay	2nd - Wheat, Seed
3rd - Sheep and Lambs	2nd - Sunflower, Seed	2nd - Wool

## 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 (2012)

\$39,230,406,083

## TRANSPORTATION

### Total Maintained County Road Miles

585

### Major Roadways

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

<sup>1</sup>Source: California Department of Finance as of January 1, 2013

<sup>2</sup>Source: California Department of Conservation 2010 Land Use Conversion

<sup>3</sup>Source: USDA National Agricultural Statistics Service 2007 Census of Agriculture

<sup>4</sup>Source: USDA National Agricultural Statistics Service Farms, Land in Farms, and Livestock Operations 2012 Summary

<sup>5</sup>Source CDFA California Agricultural Statistics California County Agricultural Commissioners' Reports 2011

# Value Summary

YEAR	ANIMAL PRODUCTION <sup>1</sup>	FIELD CROPS	FRUIT & NUT CROPS	NURSERY PRODUCTS	SEED CROPS	VEGETABLE CROPS	YEAR TOTALS
2003	60,295,600	43,945,500	26,518,000	42,373,400	5,326,600	35,663,700	\$214,122,800
2004	45,207,100	50,423,200	29,285,900	43,645,000	7,114,600	36,903,400	\$212,579,200
2005	50,901,900	52,812,700	37,918,500	50,018,000	10,533,500	36,505,000	\$238,689,600
2006	47,852,200	46,945,500	39,964,300	47,856,000	9,987,600	40,899,400	\$233,505,000
2007	54,819,600	54,811,900	43,430,000	56,610,700	10,820,900	47,762,100	\$268,255,200
2008	49,873,200	89,365,400	44,036,600	43,056,300	10,827,900	55,623,500	\$292,782,900
2009	40,115,400	50,073,100	48,191,200	33,499,400	15,859,200	64,184,200	\$251,922,500
2010	46,011,100	57,071,600	54,873,900	23,352,000	14,391,300	63,698,300	\$259,398,200
2011	52,458,000	83,811,600	63,419,700	23,630,200	14,670,600	53,668,200	\$291,658,300
2012	63,425,000	84,604,000	87,368,000	32,707,000	17,680,000	56,911,000	\$342,695,000

<sup>1</sup>Includes livestock and poultry, livestock and poultry products, and apiary production.

# Top Ten Million Dollar Commodities

CROP	2012 CROP VALUE	2012 CROP RANKING	2011 CROP RANKING
Walnuts	46,759,000	1	1
Cattle & Calves	40,765,000	2	5
Alfalfa	36,085,000	3	2
Nursery Products	32,707,000	4	4
Tomatoes (Processing)	29,294,000	5	3
Grapes (Wine)	19,778,000	6	10
Sunflower (Seed)	14,164,000	7	9
Corn (Grain)	12,927,000	8	8
Almonds	12,799,000	9	-
Wheat	9,986,000	10	7



# Field Crops

CROP	YEAR	HARVESTED ACRES	PRODUCTION		UNIT	VALUE			
			PER ACRE	TOTAL		PER UNIT	TOTAL	% CHANGE	
Barley <sup>1</sup>	2012	1,650	1.17	1,930	Ton	226.00	437,000	N/A	
	2011	-	-	-	-	-	-		
Beans, Dry	2012	1,590	1.21	1,930	Ton	1,160.00	2,241,000	358%	
	2011	545	1.13	615	Ton	794.87	489,100		
Corn (Grain)	2012	10,700	5.18	55,700	Ton	232.00	12,927,000	0%	
	2011	11,170	5.56	62,105	Ton	207.42	12,881,900		
Hay	Alfalfa	2012	28,200	6.48	183,000	Ton	197.00	36,085,000	9%
		2011	26,067	5.60	145,975	Ton	227.32	33,183,100	
	Grain	2012	3,740	3.52	13,200	Ton	163.00	2,139,000	105%
		2011	2,116	3.20	6,770	Ton	153.83	1,041,400	
	Grass	2012	1,490	3.96	5,890	Ton	178.00	1,051,000	266%
		2011	960	2.30	2,208	Ton	130.29	287,000	
Pasture, Irrigated <sup>2</sup>	2012	30,300	-	-	Acre	96.70	2,926,000	-9%	
	2011	33,410	-	-	Acre	96.74	3,232,100		
Pasture, Rangeland <sup>3</sup>	2012	179,000	-	-	Acre	15.63	2,797,000	-7%	
	2011	175,785	-	-	Acre	17.09	3,004,200		
Ryegrass	2012	6,760	3.00	20,300	Ton	152.00	3,079,000	44%	
	2011	4,557	2.88	13,124	Ton	163.17	2,141,400		
Safflower	2012	2,920	0.93	2,720	Ton	502.00	1,362,000	-12%	
	2011	3,708	0.96	3,559	Ton	434.39	1,546,200		
Sudangrass	2012	9,020	3.40	30,700	Ton	206.00	6,315,000	-1%	
	2011	8,822	3.56	31,406	Ton	202.75	6,367,600		
Triticale	2012	3,820	3.05	11,600	Ton	212.00	2,470,000	436%	
	2011	1,119	2.16	2,417	Ton	190.70	460,900		
Wheat <sup>4</sup>	2012	20,000	2.26	45,100	Ton	221.00	9,986,000	-31%	
	2011	30,365	2.31	70,049	Ton	206.00	14,399,900		
Miscellaneous <sup>5</sup>	2012	1,670	-	-	-	-	788,000	-84%	
	2011	6,380	-	-	-	-	4,776,800		
<b>TOTAL FIELD CROPS</b>	<b>2012</b>	<b>301,000</b>					<b>\$84,604,000</b>	<b>1%</b>	
	<b>2011</b>	<b>305,004</b>					<b>\$83,811,600</b>		

Figures may not add due to rounding.

<sup>1</sup>Previously reported in miscellaneous field crops.

<sup>2</sup>Acreage from the 2012 permit data.

<sup>3</sup>Calculated using data from the California Department of Conservation 2008-2010 Land Use Conversion Report.

<sup>4</sup>Includes irrigated and dryland wheat.

<sup>5</sup>Includes corn silage, sorghum/milo grain, straw, sunflower oil, and 3-way hay.



# Fruit & Nut Crops

CROP	YEAR	BEARING ACRES	PRODUCTION		UNIT	VALUE			
			PER ACRE	TOTAL		PER UNIT	TOTAL	% CHANGE	
<b>Almonds (Meats)</b>	2012	3,250	0.95	3,080	Ton	4,150.00	12,799,000	<b>43%</b>	
	2011	3,177	0.78	2,477.69	Ton	3,622.00	8,975,500		
<b>Grapes (Wine)<sup>1,2</sup></b>	<b>Dark Varieties</b>	2012	-	-	9,510	Ton	981.00	9,335,000	<b>73%</b>
		2011	-	-	6,291.10	Ton	860.00	5,409,800	
	<b>White Varieties</b>	2012	-	-	14,300	Ton	729.00	10,443,000	<b>108%</b>
		2011	-	-	7,970.50	Ton	628.00	5,009,000	
	<b>Total Grapes</b>	2012	4,040	5.89	23,800	Ton	-	19,778,000	<b>90%</b>
		2011	3,902	3.65	14,261.60	Ton	-	10,418,800	
<b>Olives<sup>3</sup></b>	2012	124	1.93	239	Ton	1,704.55	408,000	<b>135%</b>	
	2011	127	0.88	111.61	Ton	1,503.00	173,400		
<b>Prunes (Dried)</b>	2012	1,050	2.73	2,870	Ton	1,170.00	3,353,000	<b>-14%</b>	
	2011	1,063	2.80	2,974.87	Ton	1,314.00	3,911,000		
<b>Walnuts</b>	2012	8,980	1.89	17,000	Ton	2,760.00	46,759,000	<b>28%</b>	
	2011	8,944	1.93	17,262.92	Ton	2,120.00	36,597,400		
<b>Miscellaneous<sup>4</sup></b>	2012	1,110	-	-	-	-	4,272,000	<b>37%</b>	
	2011	1,059	-	-	-	-	3,122,600		
<b>TOTAL FRUIT &amp; NUT CROPS</b>	<b>2012</b>	<b>18,500</b>					<b>\$87,368,000</b>	<b>38%</b>	
	2011	18,288					\$63,419,700		

Figures may not add due to rounding.

<sup>1</sup>Includes acreage not harvested or sold.

<sup>2</sup>Total production and value per unit from the California Department of Food and Agriculture Grape Crush Report Final 2012.

<sup>3</sup>Value per unit based on oil value.

<sup>4</sup>Includes almond hulls, apples, apricots, blackberries, cherries, citrus, figs, grapes (table), kiwi, nectarines, peaches, pears, persimmons, pistachios, plums, pomegranates, and strawberries.

# Vegetable Crops

CROP	YEAR	HARVESTED ACRES	PRODUCTION		UNIT	VALUE			
			PER ACRE	TOTAL		PER UNIT	TOTAL	% CHANGE	
<b>Tomatoes (Processing)</b>	2012	10,000	41.86	419,000	Ton	70.00	29,294,000	<b>20%</b>	
	2011	9,000	38.00	342,000	Ton	71.13	24,326,500		
<b>Miscellaneous</b>	<b>Fresh<sup>1</sup></b>	2012	1,270	-	-	-	-	25,213,000	<b>0%</b>
		2011	1,530	-	-	-	-	25,333,900	
	<b>Processing<sup>2</sup></b>	2012	715	-	-	-	-	2,404,000	<b>-40%</b>
		2011	1,209	-	-	-	-	4,007,800	
<b>TOTAL VEGETABLE CROPS</b>	<b>2012</b>	<b>12,000</b>					<b>\$56,911,000</b>	<b>6%</b>	
	2011	11,739					\$53,668,200		

Figures may not add due to rounding.

<sup>1</sup>Includes beans, beets, brassicas, carrots, cucumber, eggplant, endive, garlic, herbs, leafy greens, melons, mushrooms, onions, peas, peppers, potatoes, pumpkins, radish, salad greens, sprouts, squash, sweet corn, tomatillo, tomatoes, and watermelon.

<sup>2</sup>Includes cucumbers (pickling) and peppers.



## Seed Crops

CROP	YEAR	HARVESTED ACRES	PRODUCTION		UNIT	VALUE		
			PER ACRE	TOTAL		PER UNIT	TOTAL	% CHANGE
Cucumber	2012	213	104	22,100	Lb	16.80	371,000	<b>-63%</b>
	2011	428	221	94,588	Lb	10.50	993,200	
Sunflower <sup>1</sup>	2012	8,640	1274	11,009,000	Lb	1.29	14,164,000	<b>35%</b>
	2011	7,673	1159	8,892,000	Lb	1.18	10,515,000	
Watermelon	2012	803	379	305,000	Lb	5.40	1,645,000	<b>11%</b>
	2011	817	303	247,551	Lb	6.00	1,485,300	
Wheat	2012	668	2.50	1,670	Ton	240	401,000	<b>-28%</b>
	2011	918	2.75	2,524.50	Ton	220	555,400	
Miscellaneous <sup>2</sup>	2012	268	-	-	-	-	1,100,000	<b>-2%</b>
	2011	573	-	-	-	-	1,121,700	
<b>TOTAL SEED CROPS</b>	<b>2012</b>	<b>10,600</b>					<b>\$17,680,000</b>	<b>21%</b>
	2011	10,409					\$14,670,600	

Figures may not add due to rounding.

<sup>1</sup>Includes certified and non-certified sunflower seed.

<sup>2</sup>Includes cabbage, carrot, melon, onion, pepper, sorghum, and squash.



## Nursery Products

ITEM	YEAR	ACREAGE	TOTAL VALUE	% CHANGE
Nursery Stock <sup>1</sup>	2012	1,390	28,506,000	31%
	2011	1,064	21,737,600	
Propagative Stock <sup>2</sup>	2012	189	4,202,000	122%
	2011	160	1,892,600	
<b>TOTAL NURSERY PRODUCTS</b>	<b>2012</b>	<b>1,580</b>	<b>\$32,707,000</b>	<b>38%</b>
	2011	1,224	\$23,630,200	

Figures may not add due to rounding.

<sup>1</sup>Includes christmas trees, cut flowers, fruit trees, greenhouse transplants, herbaceous and woody ornamentals, and turf.

<sup>2</sup>Includes grafted grapevines, grapevine rootstock, and grapevine cuttings.

## Apiary Production

CROP	YEAR	PRODUCTION	UNIT	VALUE		% CHANGE
				PER UNIT	TOTAL	
Apiary Products <sup>1</sup>	2012	-	-	-	755,000	34%
	2011	-	-	-	563,800	
Pollination <sup>2</sup>	2012	22,800	Colony	65.30	1,488,000	12%
	2011	19,547	Colony	68.10	1,331,200	
<b>TOTAL APIARY PRODUCTION</b>	<b>2012</b>				<b>\$2,244,000</b>	<b>18%</b>
	2011				\$1,895,000	

Figures may not add due to rounding.

<sup>1</sup>Apiary products includes beeswax, honey, packaged bees, and queen bees.

<sup>2</sup>Value 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, apple, apple, cherry, kiwi, prune, sunflower, and vine seed.





## Livestock & Poultry

ITEM	YEAR	NUMBER OF HEAD	TOTAL LIVELWEIGHT	UNIT	VALUE		
					PER UNIT	TOTAL	% CHANGE
Cattle & Calves <sup>1</sup>	2012	40,600	295,000	Cwt	138.00	40,765,000	85%
	2011	29,110	211,630	Cwt	104.10	22,030,700	
Sheep & Lambs <sup>2</sup>	2012	30,700	43,900	Cwt	131.00	5,754,000	-42%
	2011	34,330	64,368	Cwt	155.00	9,977,000	
Miscellaneous <sup>3</sup>	2012	-	-	-	-	2,121,000	85%
	2011	-	-	-	-	1,143,500	
TOTAL LIVESTOCK & POULTRY	2012					\$48,640,000	47%
	2011					\$33,151,200	

Figures may not add due to rounding.

<sup>1</sup>Includes beef stocker gain, dairy calves, dairy yearlings, dairy replavement heifers, and dairy cull cows.

<sup>2</sup>includes feeder lamb gain.

<sup>3</sup>Includes hogs, goats, poultry (chickens and broilers), rabbits, and quail.

## Livestock & Poultry Products

ITEM	YEAR	PRODUCTION	UNIT	VALUE		
				PER UNIT	TOTAL	% CHANGE
Eggs, Chicken <sup>1</sup>	2012	188,000	Dozen	4.13	775,000	N/A
	2011	-	-	-	-	
Wool	2012	251,000	Lb	1.40	356,000	-47%
	2011	389,000	Lb	1.65	671,800	
Miscellaneous <sup>2</sup>	2012	-	-	-	11,409,000	N/A
	2011	-	-	-	N/A	
TOTAL LIVESTOCK & POULTRY PRODUCTS	2012				\$12,541,000	-28%
	2011				\$17,411,800	

Figures may not add due to rounding.

<sup>1</sup>Previously reported in miscellaneous livestock.

<sup>2</sup>Includes alpaca fiber, goat milk, and market milk.

# 100 Years of Annual Precipitation at Vacaville, CA

YEAR	INCHES	YEAR	INCHES	YEAR	INCHES	YEAR	INCHES
1912-1913	12.04	1937-1938	38.46	1962-1963	35.71	1987-1988	17.48
1913-1914	39.41	1938-1939	9.64	1963-1964	16.93	1988-1989	16.15
1914-1915	31.30	1939-1940	36.02	1964-1965	27.63	1989-1990	14.12
1915-1916	36.32	1940-1941	48.82	1965-1966	18.24	1990-1991	16.36
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

The average annual precipitation over the 100 year period from October 1, 1912 to September 30, 2012 is 24.46 inches.

