

Solano County  
Crop and Livestock Report  
2011

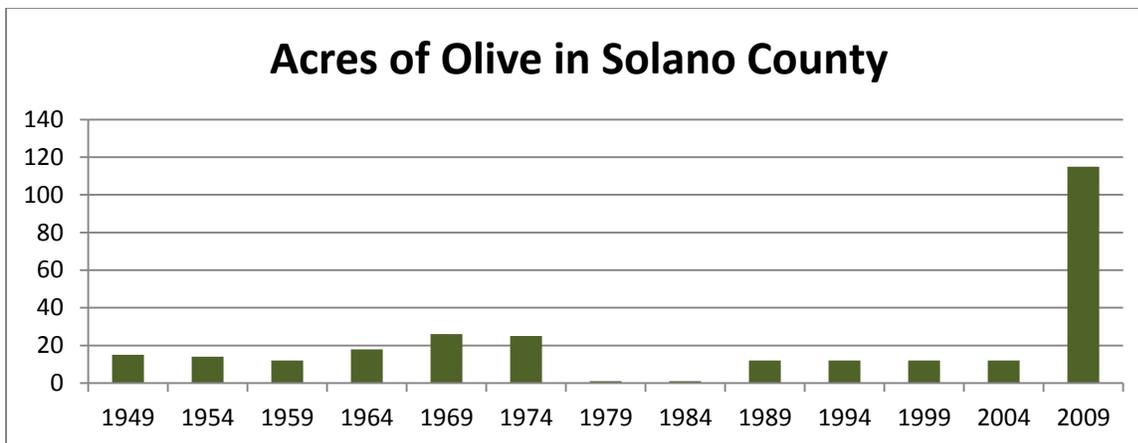
# OLIVES IN SOLANO COUNTY

The Spanish missionaries introduced the first non-native agricultural systems to California; bringing with them Olives, Wine Grapes and Cattle. This agricultural legacy established more than two hundred years ago, continues to flourish today in Solano County, as all three of those commodities play major parts in our agricultural landscape. This year, our annual Crop Report celebrates the Olive and its role in our farming heritage.

On our cover we feature the “Avenue of Olives” planted by John Wolfskill in 1861 on land subsequently donated to the University of California at Davis. Mr. Wolfskill first began planting olives on his land grant properties near Putah Creek in 1843. He continued to experiment with other Mediterranean crops, finding many of them to be suitable to the Sacramento Valley area. The Mission variety Olives planted by Wolfskill provided scion wood for grafting to orchards throughout the state. The Wolfskill property is now used as a germplasm repository by the University and has over 100 Olive varieties as well as examples of a great many other fruits. Germplasm banks preserve heritage varieties and provide genes for plant breeders to develop new varieties or to recapture traits such as disease resistance that may have been lost over the generations.

Olive production remained relatively static until recently. A review of archived County Crop Reports since 1949 shows Olive production mostly in the tens of acres through the fifties and sixties, almost disappearing (down to one harvested acre) in the seventies and eighties and then surging to its current levels in response to demand for local Olive oil production and to efficiencies gained by close-planted orchards which allow for mechanization of harvesting and pruning activities. Increased oil press capacity in the region and media attention to the dietary health benefits of Olive oil have also contributed to the growth of Olives in our county.

A visit to the Solano Grown Website – [SolanoGrown.org](http://SolanoGrown.org) shows twelve members offering Olive oil—many of them recipients of blue ribbons and gold medals in statewide competitions. The next time you sample some of our counties Olive oil, you will be sharing part of an enduring legacy. Cover Photo by Ron Allured



**Jim Allan**  
Agricultural Commissioner  
Sealer of Weights and Measures



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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 2011. Also included is the 2011 Sustainable Agriculture Report.

This report is the 62<sup>nd</sup> annual report issued by the Agricultural Commissioner. Our diversity is our strength in Solano County agricultural production. While some individual growers and market sectors experienced hardships, on balance our agricultural economy remains healthy. It is important to remember that this report is of 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 2011 was \$291,658,300, which represents an increase of \$32,260,100 from 2010 values, an increase of 12%. Processing Tomatoes, the number one crop last year, were supplanted by Walnuts and Alfalfa, pushing Tomatoes to third position. The Nursery category rebounded only slightly with the building industry remaining relatively stagnant, leaving them in fourth rank.

Solano County agriculture is diverse on many levels. Our growers not only produce an astounding array of products in every category; Fruits and Nuts, Vegetables and Row Crops, Animals, Field Crops and Honeybees, but they operate across a wide scale. Family farms predominate, but some are large, producing commodities for nationwide consumption, and others are small, servicing Farmers Markets and Community Supported Agriculture. All of them take advantage of our unique climate, soils and water.

I would like to express my sincere appreciation to all of the farmers, ranchers, boards, commissions, and agencies who contributed vital data without which this report would not be possible. Special recognition is given to Oliver Hardwick our lead on this project and the rest of my staff for their dedication to compiling and producing the 2011 Solano County Crop and Livestock Report.

To see this or any of the previous crop reports online or to learn more about the services provided and programs of the Solano County Department of Agriculture and Weights and Measures, visit our website at [www.solanocounty.com/ag](http://www.solanocounty.com/ag).

Respectfully submitted,

Jim Allan  
Agricultural Commissioner/Sealer of Weights and Measures

Solano County  
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# GENERAL INFORMATION

## POPULATION

**Solano County Population = 413,786 (Jan 1, 2012 CA Dept of Finance)**

<b>Benicia</b> 26,919	<b>Dixon</b> 18,282	<b>Fairfield</b> 106,379	<b>Rio Vista</b> 7,418
<b>Suisun City</b> 27,978	<b>Vacaville</b> 92,092	<b>Vallejo</b> 115,928	<b>Unincorporated</b> 18,790

## SOLANO COUNTY STATE RANKING

**By Gross Value of Agricultural Production = 27th (2010)**  
**For Leading Commodities - Gross Values of Production 2010:**

2nd - Hay, Sudan  
3rd - Sheep & Lambs

### AREA

<b>California Total Land Area 2007 (Acres)</b>	99,689,515
<b>California Agricultural Land 2007 (Acres)</b>	25,364,695
<b>County (Square Miles-Land 2010)</b>	826.42
<b>County (Acres-Land 2010)</b>	528,911
<b>County (Acres-Urban &amp; Built-up Land 2010)</b>	59,591
<b>County (Square Miles-Water 2010)</b>	83.53
<b>County (Acres-Water 2010)</b>	53,462

### FARM SIZE

<b>Average US Size (Acres 2011)</b>	420
<b>Average California Size (Acres 2011)</b>	312
<b>Average Solano County (Acres 2007)</b>	403
<b>Number of Full-time Farms in Solano County (2007)</b>	470

**Local Assessed Property Values for Solano County (2011)**  
\$39,084,542,084

## SOLANO COUNTY FARMING REGIONS

Dixon Ridge  
Elmira/Maine Prairie  
Green Valley

Jepson Prairie  
Montezuma Hills  
Pleasants/Vaca/Lagoon Valleys  
Ryer Island

Suisun Valley  
Western Hills  
Winters

## SOLANO COUNTY TRANSPORTATION

**Total Maintained Road Miles = 585 (December 31, 2011)**

**BRIDGES**  
92

**MAJOR ROADWAYS**  
Interstates 80, 505, 680, 780  
Hwys 12, 29, 37, 84, 113, 220

**RAILROADS**  
Amtrak, Union Pacific  
California Northern

## SOLANO COUNTY FACILITIES

Travis Air Force Base, University of California at Davis,  
Nut Tree Airport, California Maritime Academy

**GRAND TOTAL OF ALL  
AGRICULTURAL PRODUCTS  
(U S D O L L A R S)**

2011      \$291,658,300  
2010      \$259,398,200

**V A L U E   S U M M A R Y**

Year	Field Crops	Nursery	Fruit & Nut Crops	Seed Crops	Vegetable Crops	Animal Production	Year Totals
<b>2002</b>	47,901,800	38,781,200	25,974,800	5,739,700	37,155,000	43,933,000	199,485,500
<b>2003</b>	43,945,500	42,373,400	26,518,000	5,326,600	35,663,700	60,295,600	214,122,800
<b>2004</b>	50,423,200	43,645,000	29,285,900	7,114,600	36,903,400	45,207,100	212,579,200
<b>2005</b>	52,812,700	50,018,000	37,918,500	10,533,500	36,505,000	50,901,900	238,689,600
<b>2006</b>	46,945,500	47,856,000	39,964,300	9,987,600	40,899,400	47,852,200	233,505,000
<b>2007</b>	54,811,900	56,610,700	43,430,000	10,820,900	47,762,100	54,819,600	268,255,200
<b>2008</b>	89,365,400	43,056,300	44,036,600	10,827,900	55,623,500	*49,873,200	*292,782,900
<b>2009</b>	50,073,100	33,499,400	48,191,200	15,859,200	64,184,200	40,115,400	251,922,500
<b>2010</b>	57,071,600	23,352,000	54,873,900	14,391,300	63,698,300	46,011,100	259,398,200
<b>2011</b>	83,811,600	23,630,200	63,419,700	14,670,600	53,668,200	52,458,000	291,658,300

\*Revised 2008 Figure

**MILLION DOLLAR CROPS  
Top Ten**

	Dollar Amounts	RANKING	
		2011	2010
Walnuts	36,597,400	1	2
Alfalfa	33,183,100	2	5
Tomatoes, Processing	24,326,500	3	1
Nursery Products	23,630,200	4	3
Cattle & Calves	22,030,700	5	4
Milk, Market	16,740,000	6	6
Wheat <sup>1</sup>	14,399,900	7	-
Corn, Grain	12,881,900	8	7
Sunflower, Seed <sup>2</sup>	10,515,000	9	-
Grapes, Wine	10,418,800	10	8
Almonds	-	-	9
Sheep and Lambs	-	-	10

<sup>1</sup> 2011 ranking includes irrigated and dryland wheat

<sup>2</sup> 2011 ranking includes certified and non-certified sunflower seed

## ACREAGE, PRODUCTION & VALUE Fruit and Nut Crops

Crop	Year	Bearing Acres	Per Acre	Total	Unit	Per Unit	Total Value (\$)	
Almonds - Meats	2011	3,177	0.78	2,477.69	Ton	3,622	8,975,500	
	2010	3,132	0.75	2,349.00	Ton	3,605	8,468,100	
Apples <sup>1</sup>	2011	-	-	-	-	-	-	
	2010	146	12.99	1896.54	Ton	305	578,400	
Apricots <sup>1</sup>	2011	-	-	-	-	-	-	
	2010	54	2.02	109.08	Ton	967	105,500	
Cherries <sup>1</sup> Fresh Market	2011	-	-	-	-	-	-	
	2010	75	0.35	26.25	Ton	2,149	56,400	
Grapes, Wine <sup>2,3</sup>	Dark Varieties	2011	-	-	6,291.10	Ton	860	5,409,800
	Dark Varieties	2010	-	-	4,765.10	Ton	829	3,950,300
	White Varieties	2011	-	-	7,970.50	Ton	628	5,009,000
	White Varieties	2010	-	-	8,874.10	Ton	600	5,324,500
Total Grapes	2011	3,902	3.65	14,261.60	Ton	-	10,418,800	
	2010	3,615	3.77	13,639.20	Ton	-	9,274,800	
Olives <sup>2,4</sup>	2011	127	0.88	111.61	Ton	1,503	173,400	
	2010	118	1.37	161.66	Ton	1,720	278,100	
Peaches <sup>1</sup>	2011	-	-	-	-	-	-	
	2010	98	1.51	147.98	Ton	1,196	177,000	
Persimmons <sup>1</sup>	2011	-	-	-	-	-	-	
	2010	18	1.67	30.06	Ton	2,203	66,200	
Prunes (Dried Plums)	2011	1,063	2.80	2,974.87	Ton	1,314	3,911,000	
	2010	1,055	2.39	2,521.45	Ton	1,194	3,010,600	
Strawberries	2011	16	-	-	Flat	24	221,000	
	2010	24	-	-	Flat	17	218,700	
Walnuts	2011	8,944	1.93	17,262.92	Ton	2,120	36,597,400	
	2010	8,534	1.96	16,726.64	Ton	1,863	31,161,700	
Misc Fruit & Nuts <sup>5</sup>	2011	1059	-	-	-	-	3,122,600	
	2010	531	-	-	-	-	1,478,400	
<b>TOTAL FRUIT &amp; NUT CROPS</b>	2011	18,288					\$63,419,700	
	2010	17,400					\$54,873,900	

Figures may not add due to rounding

<sup>1</sup>Included in misc fruit & nut crops

<sup>2</sup>Includes acreage not harvested or sold

<sup>3</sup>Production data from California Dept of Food & Agriculture Grape Crush Report, Final 2011

<sup>4</sup>Price based on oil value

<sup>5</sup>Includes almond hulls, apples, apricots, blackberries, cherries, citrus, figs, kiwi, nectarines, peaches, pears, persimmons, pistachios, plums, table grapes, etc.

## ACREAGE, PRODUCTION & VALUE

### Field Crops

Crop		Year	Harvested Acres	Per Acre	Total	Unit	Per Unit	Total Value (\$)
Beans, Dry	Edible, all classes	2011	545	1.13	615	Ton	794.87	489,100
		2010	1,060	1.14	1,208	Ton	765.76	925,300
Corn, Grain		2011	11,170	5.56	62,105	Ton	207.42	12,881,900
		2010	11,173	5.37	60,000	Ton	166.09	9,965,200
Hay	Alfalfa	2011	26,067	5.60	145,975	Ton	227.32	33,183,100
		2010	27,121	5.75	155,946	Ton	127.00	19,742,700
	Grain	2011	2,116	3.20	6,770	Ton	153.83	1,041,400
		2010	2,647	3.87	10,244	Ton	78.98	809,100
	Grass	2011	960	2.30	2,208	Ton	130.29	287,000
		2010	1,802	2.98	5,370	Ton	77.05	413,800
Pasture, Irrigated <sup>1</sup>		2011	33,410	-	-	Acre	96.74	3,232,100
		2010	36,709	-	-	Acre	84.65	3,107,400
Pasture, Rangeland <sup>2</sup>		2011	175,785	-	-	Acre	17.09	3,004,200
		2010	167,809	-	-	Acre	15.98	2,681,600
Ryegrass		2011	4,557	2.88	13,124	Ton	163.17	2,141,400
		2010	6,573	2.65	17,418	Ton	71.56	1,246,500
Safflower, Oil		2011	3,708	0.96	3,559	Ton	434.39	1,546,200
		2010	3,222	0.85	2,739	Ton	302.92	829,600
Sudangrass		2011	8,822	3.56	31,406	Ton	202.75	6,367,600
		2010	10,055	3.95	37,717	Ton	156.19	6,203,400
Triticale, Grain		2011	1,119	2.16	2,417	Ton	190.70	460,900
		2010	1,820	2.02	3,676	Ton	131.89	484,900
Wheat	Irrigated	2011	15,520	2.61	40,507	Ton	198.22	8,029,300
		2010	10,919	2.71	29,590	Ton	166.21	4,918,200
	Dryland	2011	14,845	1.99	29,542	Ton	215.65	6,370,600
		2010	14,825	2.09	30,984	Ton	153.45	4,754,500
Total Wheat		2011	30,365					14,399,900
		2010	25,744					9,672,700
Misc Field Crops <sup>3</sup>		2011	6,380	-	-	-	-	4,776,800
		2010	8,554	-	-	-	-	989,400
<b>TOTAL FIELD CROPS</b>		2011	305,004					\$83,811,600
		2010	304,289					\$57,071,600

Figures may not add due to rounding

<sup>1</sup> Acreage data source-2011 Restricted Materials Permit Program

<sup>2</sup> Calculated using data from CA Dept of Conservation 2008-2010 Land Use Conversion Report

<sup>3</sup> Includes barley, silage, sorghum grain, straw, sunflower oil, 3-way hay, triticale hay

## ACREAGE, PRODUCTION & VALUE Vegetable Crops

Crop	Year	Harvested Acres	Per Acre	Total	Unit	Per Unit	Total Value (\$)
Tomatoes, Processing	2011	9,000	38.00	342,000	Ton	71.13	24,326,500
	2010	11,000	49.78	547,600	Ton	67.39	36,901,400
Misc. Processing <sup>1</sup>	2011	1,209	-	-	-	-	4,007,800
	2010	1,046	-	-	-	-	3,900,800
Vegetables Fresh <sup>2</sup>	2011	1,530	-	-	-	-	25,333,900
	2010	1,511	-	-	-	-	22,896,100
<b>TOTAL</b>	2011	11,739					\$53,668,200
<b>VEGETABLE CROPS</b>	2010	13,557					\$63,698,300

<sup>1</sup>Includes cucumber (pickling) and peppers

<sup>2</sup>Includes beans, beets, brassicas, carrots, cucumber, endive, garlic, herbs, leafy greens, melons, mushrooms, onions, peas, peppers, potatoes, pumpkins, salad greens, sprouts, squash, sweet corn, tomatillo, tomatoes, etc.

## ACREAGE, PRODUCTION & VALUE Seed Crops

Crop	Year	Harvested Acres	Per Acre	Total	Unit	Per Unit	Total Value (\$)
Cucumber	2011	428	221	94,588	Lb	10.50	993,200
	2010	496	242	120,121	Lb	9.95	1,195,000
Sunflower Non-Certified	2011	1,501	1253	1,880,753	Lb	1.08	2,031,200
	2010	2,254	1454	3,276,662	Lb	0.86	2,817,900
Sunflower Certified	2011	6,172	1136	7,011,392	Lb	1.21	8,483,800
	2010	3,757	1652	6,206,714	Lb	0.81	5,027,400
Total Sunflower	2011	7,673					10,515,000
	2010	6,011					7,845,300
Watermelon <sup>1</sup>	2011	817	303	247,551	Lb	6.00	1,485,300
Wheat Certified	2011	918	2.75	2,524.50	Ton	220.00	555,400
	2010	1,338	3.00	4,014	Ton	180.00	722,500
Misc Seed <sup>2</sup>	2011	573	-	-	-	-	1,121,700
	2010	2,584	-	-	-	-	4,628,500
<b>TOTAL</b>	2011	10,409					\$14,670,600
<b>SEED CROPS</b>	2010	10,429					\$14,391,300

Some figures may not add due to rounding

<sup>1</sup>Previously reported in misc seed.

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

## ACREAGE & VALUE Nursery Products

Item	Year	Acreage	Total Value (\$)
Nursery Stock <sup>1</sup>	2011	1064	21,737,600
	2010	1273	23,352,000
Propagative Stock <sup>2</sup>	2011	160	1,892,600
	2010	-	-
<b>TOTAL</b>	2011	1224	\$23,630,200
<b>NURSERY PRODUCTS</b>	2010	1273	\$23,352,000

<sup>1</sup>Includes bedding plants, Christmas trees, cut flowers, fruit trees, greenhouse transplants, herbaceous perennials, turf and woody ornamentals

<sup>2</sup>Propagative Stock included in Nursery Stock for 2010. 2011 Propagative Stock includes grafted grapevines, grapevine cuttings and rootstock.

## PRODUCTION & VALUE Livestock & Poultry

Item	Year	Number of Head	Total Liveweight	Unit	Unit Value	Total Value (\$)
Cattle & Calves <sup>1</sup>	2011	29,110	211,630	Cwt	104.10	22,030,700
	2010	30,640	220,019	Cwt	102.75	22,608,000
Sheep & Lambs <sup>2</sup>	2011	34,330	64,368	Cwt	155.00	9,977,000
	2010	32,696	62,346	Cwt	101.94	6,355,600
Miscellaneous <sup>3</sup>	2011	-	-	-	-	1,143,500
	2010	-	-	-	-	1,410,200
<b>TOTAL LIVESTOCK &amp; POULTRY</b>	2011					\$33,151,200
	2010					\$30,373,800

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

<sup>2</sup>Includes feeder lamb gain

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

## PRODUCTS AND VALUE Livestock, Poultry & Apiary

Item	Year	Production	Unit	Unit Value	Total Value (\$)	
Bees	Pollination <sup>1</sup>	2011	19,547	Colony	68.10	1,331,200
		2010	21,312	Colony	61.39	1,308,400
	Apiary Products <sup>2</sup>	2011	-	-	-	563,800
		2010	-	-	-	469,500
Milk	Market	2011	867,355	Cwt	19.30	16,740,000
		2010	866,536	Cwt	15.44	13,383,000
Wool	2011	389,000	Lb	1.65	671,800	
	2010	342,700	Lb	1.39	476,400	
<b>TOTAL LIVESTOCK, POULTRY &amp; APIARY</b>	2011				\$19,306,800	
	2010				\$15,637,300	

<sup>1</sup>Values based on pollinated acres and number of colonies used for adequate pollination. Pollination fee varies by crop. (Crops pollinated include almond, apple, cherry, kiwi, prune, sunflower and vine seed)

<sup>2</sup>Apiary products include bee packages, honey, queens and wax

## SUSTAINABLE AGRICULTURE REPORT

"Sustainable agriculture" ([U.S. Code Title 7, Section 3103](#)) means an integrated system of plant and animal production practices having a site-specific application that will over the long-term:

- Satisfy human food and fiber needs.
- Enhance environmental quality and the natural resource base upon which the agriculture economy depends.
- Make the most efficient use of nonrenewable resources and on-farm resources and integrate, where appropriate, natural biological cycles and controls.
- Sustain the economic viability of farm operations.
- Enhance the quality of life for farmers and society as a whole.

This year, in keeping with our crop cover, we highlight the sustainable agricultural practices used in the production of Olives. Listed below are some examples of the Integrated Pest Management (IPM) methods used to control Olive pests.

- **Olive Fruit Fly** (*Bactrocera oleae*)- This introduced pest from the Mediterranean was first identified in California in 1998. The adult fly lays eggs under the skin of the olive where the larvae develop and feed, leaving tunnels and frass behind, damaging the fruit and encouraging breakdown of the olive. Each female can lay from 50-400 eggs and live for up to 5 months. The fly is adaptive to a variety of climatic conditions and may overwinter as a pupa in the soil or as an adult in areas with mild winters. Infestations effect yields by destroying the fruit quality for table fruit, and resulting in off tastes (increase acidity) preventing use for olive oil production. Most damage occurs shortly before harvest.
  - Current control measures include trapping using a baited lure to monitor infestation levels followed by applications of Spinosad a registered organic pesticide mixed with a feeding lure to kill the adults, also used is a Kaolin, a clay type material that appears to reduce the attractiveness of the olives as hosts by coating the fruit and leaves. Timing of applications is the key for control, with heavy infestations occurring rapidly usually in late June and early July.
- **Scale Insects**- damage from these sucking insects primarily occurs to fruit and growing tips by scarring and distortion. Pruning to open the canopy, ant control, biological control organisms and use of agricultural oils have proven to be effective control measures in most situations
- **Verticillium** (a fungal disease) of soil that infests the tree roots and eventually results in tree death is usually addressed prior to planting by site selection, avoiding areas where susceptible crops have been grown and also through pre-plant soil treatments.

*Organic* is a legally defined term that is used to identify agricultural products that meet the requirements of the National Organic Program and California Organic Products Act. Those statutes include a certification process, registration and inspection program for producers. This framework to ensure compliance with the regulations, is administered through private certifying agencies, state inspection and local verification is provided by the Office of the County Agricultural Commissioner.

**ORGANIC FARMS**

Year	No. of Farms	Acres	Approx. Value
2011	35	2,077	\$8,738,200
2010	32	1,926	\$7,768,204

**Certified Producer Certificates**

**At its most basic, the program assures that buyers are purchasing directly from those who produce the product.**

Growers participating in Certified Farmers Markets must hold a “certified producer certificate” issued by the Agricultural Commissioner’s office. This certificate lists the commodities produced by the grower as well as estimated amounts of production. This information is verified by field inspections conducted at the growing grounds.

