

GLENN COUNTY

2011

Annual Crop & Livestock Report



Strawberry plants being harvested in December for spring planting

Glenn County

Glenn County is located in the heart of the Sacramento Valley and is primarily an agricultural community. The Coast Range mountains are on the west (dark part of map below) and the Sacramento River is located on the east. Interstate 5 runs north and south through the middle of this rich farm land. The population of Glenn County is slightly over 29,000 and the two major cities, Willows and Orland, lie along Interstate 5.

With over 1,000 farms and 705,020 acres under cultivation, agriculture remains the primary source of Glenn County's economy. Major commodities include rice, almonds, dairies, walnuts, corn and wheat.

Glenn County was incorporated on March 5, 1891 and the county seat, Willows, was created 6 days later on March 11, 1891. Glenn County was created out of the northern portion of Colusa County, then called Colusi County and was named for Dr. Hugh L. Glenn, the largest wheat farmer in California in his lifetime.

Glenn County began a Certified Farmers Market in 2010. This new tradition is continuing in 2012. The markets are held in Willows on Wednesdays and in Orland on Saturdays. Both markets run from June through October.



Alfalfa hay harvest
Irrigation canal
Olive orchard

County Of Glenn

DEPARTMENT OF AGRICULTURE

Jim Donnelly, Agricultural Commissioner
Sealer of Weights and Measures

Jean Miller, Assistant Agricultural Commissioner
Assistant Sealer of Weights & Measures

TO: Karen Ross, Secretary
State of California
Department of Food and Agriculture

and

The Honorable Board of Supervisors
Chairman: Steve Soeth District 3
John Viegas District 1
Dwight Foltz District 2
Michael Murray District 4
Leigh McDaniel District 5

I am pleased to submit the 2011 Annual Crop and Livestock Report for Glenn County as required by Section 2279 of the California Food and Agriculture Code which requires each County Agricultural Commissioner to summarize the acreage, production and gross value of Glenn County agricultural and forest commodities. Section 2272 of the California Food and Agriculture Code requires each County Agricultural Commissioner to report on actions taken to eradicate, control or manage pests in their county.

Agriculture continues to be the county's major industry. The 2011 gross production of agricultural commodities was valued at \$611,358,000. This represents an increase of 7 percent from the 2010 gross agricultural production value of \$566,308,000.

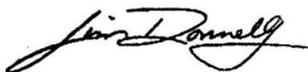
Rice, again, is in the lead this year as the number one commodity with a total value of \$139,695,000 for paddy rice (this does not include organic rice and rice grown for seed). Almonds are in the number two spot with a value of \$120,476,000, which is up 13% from 2010 due to an increase in acres, yield and price. Rice and almonds represent 47% of the top 10 commodities for 2011. The value of walnuts also increased impressively (32%), due to an increase in acres coming into production, yield and price.

The yield of table olives fell drastically compared to the year before (91%) due to excessive freezing temperatures from November to spring with late frosts in March and April. The acres of oil olives continues to increase dramatically each year as planted acres come into production. In fact, the largest oil olive mill in North America, is located in Glenn County.

Values given in this report are gross receipts received by growers and do not reflect their net income. These values do not take into account the various costs of production, marketing or transportation.

I want to express my appreciation for the cooperation and assistance of all individuals, related agencies and members of the agricultural industry for their help in compiling this report. Members of my staff should be commended for their countless hours and extra efforts to gather this year's information and to Jean Miller for the compilation of the report.

Respectfully submitted,



Jim Donnelly
Agricultural Commissioner

FIELD CROPS

Production and Value of Agricultural Products

COMMODITY	YEAR	PRODUCTION			VALUE			
		ACREAGE	PER ACRE	TOTAL	UNIT	PER UNIT	TOTAL	
BARLEY	2011	Included under miscellaneous						
	2010	918	1.77	1,625	Ton	204	\$332,000	
BEANS	2011	1,104	1.50	1,656	Ton	\$969	1,605,000	
	2010	1,553	0.92	1,428	Ton	\$912	1,302,000	
CORN	2011	16,215	6.91	112,046	Ton	208	23,306,000	
	2010	14,235	5.99	85,270	Ton	168	14,325,000	
COTTON, LINT	2011	2,496	2.34	5,841	500 lb.	512	2,991,000	
	2010	2,606	2.98	7,766	(bale)	725	5,630,000	
COTTON, SEED	2011			1,718	Ton		618,000	
	2010			3,242	Ton	300	793,000	
FODDER, FROM OATS	2011	958	6.50	6,227	Ton	210	1,308,000	
	2010	0					0	
HAY, ALFALFA	2011	10,992	6.27	68,920	Ton	202	13,922,000	
	2010	15,135	6.41	97,015	Ton	100	9,702,000	
HAY, OTHER	2011	2,607	2.72	7,901	Ton	121	956,000	
	2010	3,856	3.62	13,959	Ton	83	1,159,000	
PASTURE, IRRIGATED	2011	8,145			Acres	162	1,319,000	
	2010	7,047			Acres	162	1,142,000	
RANGE	2011	230,000			Acres	6	1,380,000	
	2010	230,000			Acres	6	1,380,000	
RICE, PADDY	2011	84,923	4.47	379,605	Ton	368	139,695,000	
	2010	88,209	4.32	381,063	Ton	435	165,762,000	
SILAGE, CORN	2011	1,453	29.00	42,137	Ton	58	2,444,000	
	2010	905	27.40	24,800	Ton	26	633,000	
WHEAT	2011	13,480	2.53	34,104	Ton	207	7,060,000	
	2010	10,519	2.69	28,296	Ton	176	4,980,000	
MISCELLANEOUS	2011	14,002	Includes barley, organic rice, safflower,					4,973,000
	2010	14,044	sudangrass and straw from barley, rice and wheat.					5,050,000
TOTALS	2011	386,375					\$201,577,000	
	2010	389,027					\$212,190,000	

1
1

2
2

1 714 pounds of seed per bale

2 Includes USDA support price

rice at harvest time



FRUIT and NUT CROPS

Production and Value of Agricultural Products

Commodity	Year	Bearing PRODUCTION			Unit	VALUE	
		Acreage	Per Acre	Total		Per Unit	Total
ALMONDS	2011	33,239	0.91	30,247	Meat	\$3,983	\$120,476,000
	2010	32,671	0.84	27,444	Ton	\$3,804	\$104,397,000
ALMOND HULLS	2011			37,809	Ton	90	3,403,000
	2010			34,305		90	3,087,000
CITRUS	2011	429	0.35	150	Ton	987	148,000
	2010	429	0.52	223		807	180,000
GRAPES	2011	1,100	6.15	6,765	Ton	553	3,741,000
	2010	1,020	7.85	8,007		625	5,004,000
OLIVES, Table	2011	4,485	0.37	1,659	Ton	968	1,606,000
	2010	4,485	5.07	22,739		763	17,350,000
OLIVES, Oil	2011	3,890	2.88	11,203	Ton	449	5,030,000
	2010	2,761	4.80	13,253		555	7,355,000
PISTACHIOS	2011	1,351	0.45	608	Inshell	3,609	2,194,000
	2010	1,265	0.73	923	Ton	4,748	4,382,000
PRUNES	2011	5,743	2.21	12,692	Dry	1,181	14,989,000
	2010	6,819	2.15	14,660	Ton	1,472	21,580,000
WALNUTS	2011	17,596	2.34	41,175	Inshell	2,491	102,567,000
	2010	16,800	2.09	35,112	Ton	2,000	70,224,000
MISCELLANEOUS	2011	327	2011 includes black walnuts, blueberries, cherries,				1,536,000
	2010	330	kiwis, pecans and Asian pears.				1,295,000
TOTALS	2011	68,160					\$255,690,000
	2010	66,580					\$234,854,000

1
2



Almonds in bloom



- 1 36.4 gallons of olive oil equals 1 ton harvested olives
- 2 37 gallons of olive oil equals 1 ton harvested olives

NURSERY PRODUCTS

Production and Value of Agricultural Products

COMMODITY	YEAR	ACREAGE		TOTAL VALUE
TOTALS	2011	217	Includes grapes for rootstock, potted plants, sod and strawberry plants	\$3,487,000
	2010	238		\$4,475,000



VEGETABLE CROPS

Production and Value of Agricultural Products

COMMODITY	YEAR	ACREAGE	PRODUCTION			VALUE	
			PER ACRE	TOTAL	UNIT	PER UNIT	TOTAL
TOTALS	2011	130					\$456,000 *
	2010	29					\$184,000 **

* Includes cucumbers, eggplant, melons, onions, peppers, pumpkins, squash, strawberries, sweet corn, tomatoes (fresh & processing) and watermelons

** Includes cucumbers, eggplant, melons, onions, peppers, pumpkins, squash, strawberries, sweet corn, tomatoes (fresh) and watermelons

FOREST PRODUCTS

Production and Value of Forest Products

COMMODITY	YEAR		PRODUCTION		VALUE	
			UNIT	PER UNIT	PER UNIT	TOTAL
CHRISTMAS TREES	2011		1,600	Each	\$23	\$37,000
	2010		1,500		\$23	\$34,500
FIREWOOD	2011		840	Cord	120	101,000
	2010		850		120	102,000
TIMBER	2011		372,000	Board Ft	0.18	67,000
	2010		0		0	0
TOTALS	2011					\$205,000
	2010					\$137,000





APIARY PRODUCTS



Production and Value of Agricultural Products

COMMODITY	YEAR	PRODUCTION			VALUE	
		TOTAL	UNIT	PER UNIT	TOTAL	
BEESWAX	2011	5,642		\$2.05	\$11,600	
	2010	5,700	Lb	\$1.87	\$10,700	
HONEY	2011	136,779		1.66	227,000	
	2010	169,058	Lb	1.50	253,000	
PACKAGED BEES	2011	227,264		14.26	3,241,000	
	2010	164,480	Lb	13.36	2,197,000	
POLLINATION	2011	Includes almonds, prunes, sunflowers, onions, clover			9,327,000	
	2010	and vine seeds			8,748,000	
QUEEN BEES	2011	211,228		16.78	3,544,000	
	2010	193,243	Each	14.06	2,717,000	
TOTALS	2011				\$16,351,000	
	2010				\$13,926,000	

SEED CROPS

Production and Value of Agricultural Products

COMMODITY	YEAR	ACREAGE	PRODUCTION			VALUE	
			PER ACRE	TOTAL	UNIT	PER UNIT	TOTAL
BEANS	2011	873	1,980	1,728,540		\$0.62	\$1,072,000
	2010	989	2,300	2,274,700	Lb	\$0.43	\$978,000
RICE	2011	2,286	8,517	19,469,862		0.14	2,726,000
	2010	2,544	8,950	22,768,800	Lb	0.22	5,009,000
SUNFLOWER	2011	6,245	994	6,207,530		1.18	7,325,000
	2010	4,382	1,051	4,605,482	Lb	1.10	5,066,000
VINE CROPS	2011	2,581	Includes cucumbers, melons, pumpkins,			8,553,000	
	2010	3,607	squash and watermelons (plus gourds in 2010)			8,919,000	
OTHER SEED	2011	643	Includes carrots and onions			2,281,000	
	2010	895	Includes, carrots, leeks and onions			4,016,000	
TOTALS	2011	12,628				\$21,957,000	
	2010	12,417				\$23,988,000	



Almond pollination



Pumpkins for seed



LIVESTOCK and POULTRY

Production and Value of Agricultural Products

COMMODITY	YEAR	NUMBER	TOTAL	UNIT	PER UNIT	VALUE	
		OF HEAD	WEIGHT			TOTAL	
BEEF CATTLE	2011	12,627	N/A	Head	\$980.00	\$12,374,000	
DAIRY CATTLE	2011	16,362	N/A		\$1,330.00	\$21,761,000	
CATTLE and CALVES	2010	32,085	213,177	Cwt	\$82.64	\$17,617,000	
SHEEP and LAMBS	2011	6,154	6,400	Cwt	66.00	406,000	
	2010	6,480	6,672		106.00	707,000	
HOGS and PIGS	2011	1,929	3,491	Cwt	160.00	309,000	
	2010	1,910	3,438		55.10	189,000	
POULTRY	2011	Included under Livestock and Poultry Products to protect individual operations.					
	2010						
TOTALS	2011						\$34,850,000
	2010						\$18,513,000

LIVESTOCK and POULTRY PRODUCTS

Production and Value of Agricultural Products

COMMODITY	YEAR	PRODUCTION	UNIT	PER UNIT	VALUE
					TOTAL
MILK: Market	2011	3,966,710	Cwt	\$18.54	\$73,543,000
	2010	3,698,452		\$14.78	\$54,663,000
MILK: Manufacturing	2011	140,126	Cwt	18.77	2,630,000
	2010	186,818		14.64	2,735,000
WOOL	2011	73,208	Lbs	1.70	124,000
	2010	75,473		1.25	94,300
MISCELLANEOUS	2011				488,000
	2010				482,000
TOTALS	2011				\$76,785,000
	2010				\$57,974,000

*



Holsteins at pasture

* revised

VALUE of AGRICULTURAL and FOREST PRODUCTION

VALUE of AGRICULTURAL PRODUCTS	2010	2011
Field Crops	\$212,190,000	\$201,577,000
Fruit and Nut Crops	234,854,000	255,690,000
Livestock and Poultry Products	57,974,000 *	76,785,000
Livestock and Poultry	18,513,000	34,850,000
Seed Crops	23,988,000	21,957,000
Apiary Products	13,926,000	16,351,000
Nursery Products	4,475,000	3,487,000
Vegetable Crops	184,000	456,000
TOTAL AGRICULTURAL PRODUCTION	\$566,104,000 *	\$611,153,000

VALUE of FOREST PRODUCTS	2010	2011
Timber	\$0	\$67,000
Firewood	102,000	101,000
Christmas Trees	34,500	37,000
TOTAL FOREST PRODUCTION	\$137,000	\$205,000

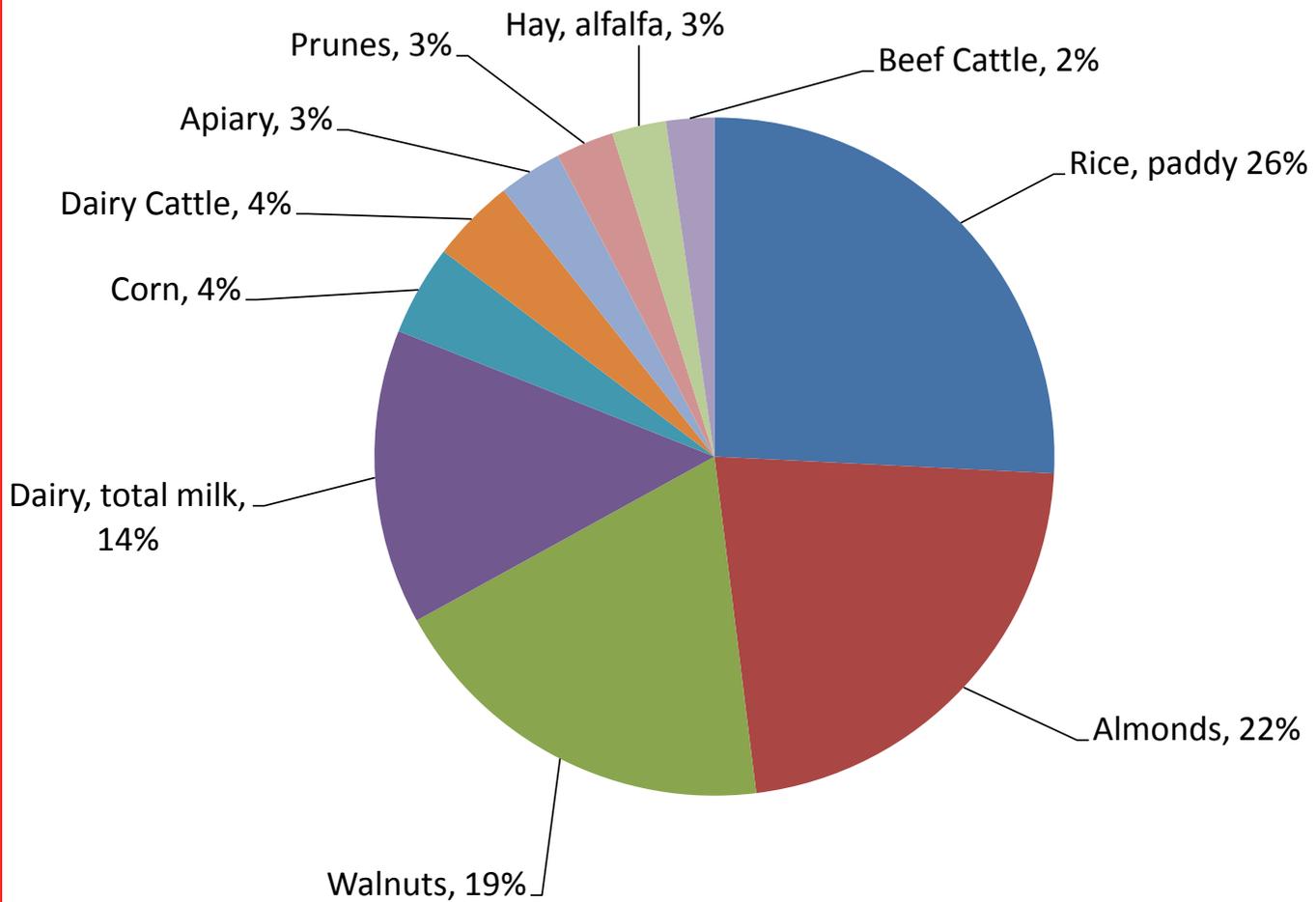
GRAND TOTAL ALL PRODUCTION \$566,241,000 * \$611,358,000

* Revised

GLENN COUNTY'S TEN LEADING AGRICULTURAL COMMODITIES

Commodity	2010 Value	2011 Value
1) Rice, paddy	\$165,762,000	\$139,695,000
2) Almonds	104,397,000	120,476,000
3) Walnuts	70,224,000	102,567,000
4) Dairy, total milk	57,398,000	76,173,000
5) Corn	14,325,000	23,306,000
6) Dairy Cattle	N/A	21,761,000
7) Apiary	13,926,000	16,351,000
8) Prunes	21,580,000	14,989,000
9) Hay, alfalfa	9,702,000	13,922,000
10) Beef Cattle	N/A	12,374,000

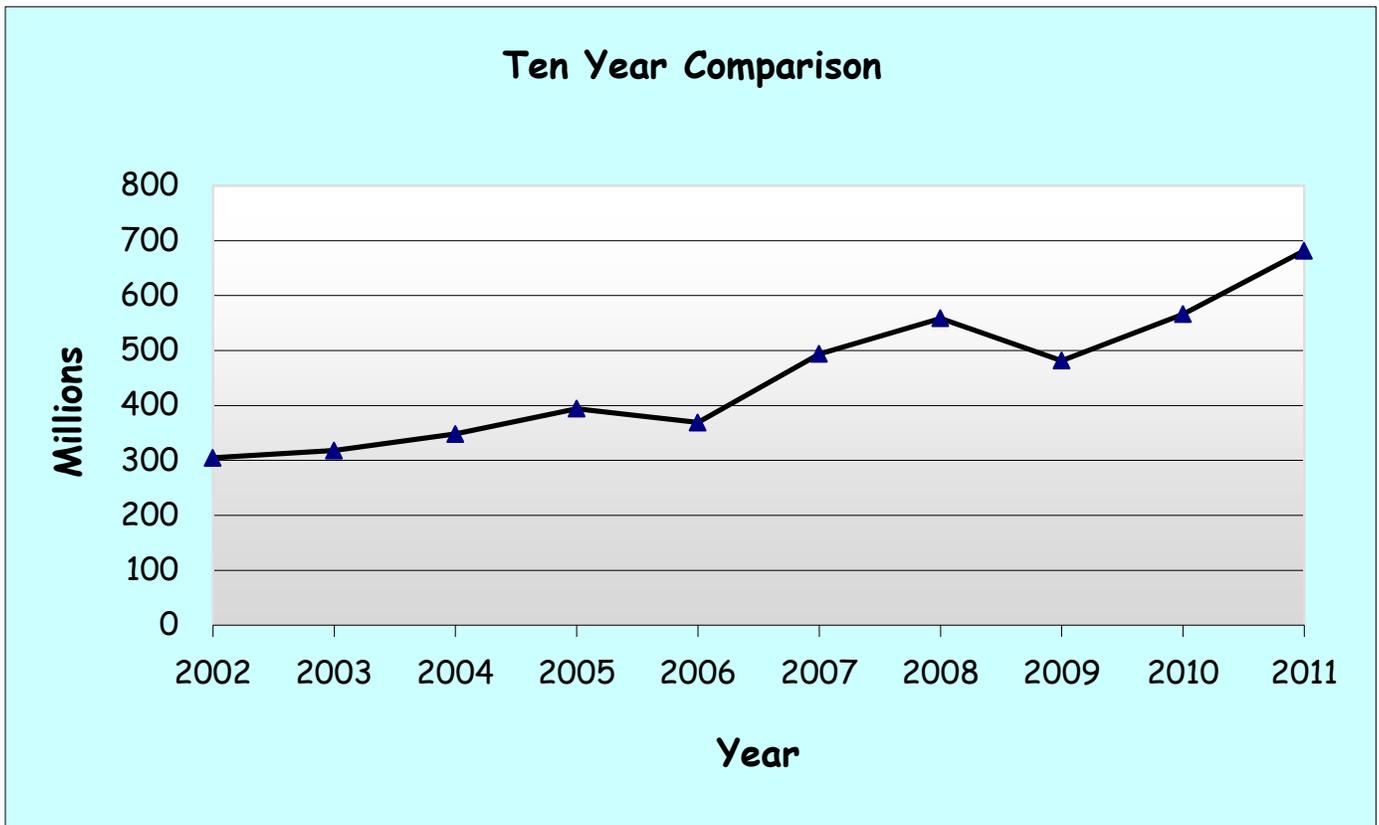
Ten Leading Commodities 2011



TEN YEAR PRODUCTION COMPARISON

2002 - 2011

<u>Year</u>	<u>Grand Total</u>
2011	\$681,888,000
2010	\$566,308,000
2009	\$481,677,000
2008	\$558,760,000
2007	\$493,848,000
2006	\$369,014,000
2005	\$394,212,000
2004	\$348,138,000
2003	\$318,042,000
2002	\$304,664,000



Cultivators of the earth are the most valuable citizens. They are the most vigorous, the most independent, the most virtuous, and they are tied to their country and wedded to its liberty and interests by the most lasting bands.

- Thomas Jefferson

PEST EXCLUSION

Terminal Inspections	Number of Shipments Profiled	Number of Shipments Inspected	Rejections
Postal	0	0	0
Truck	2	2	0
Other	25	25	0

Origin Certification	Number of Inspections
Field Inspections	533
Phyto Certificates Issued	2,876

ORGANIC FARMING

Crop	Number of Farms		Acres
Almonds	2011	6	185
	2010	7	141
Citrus	2011	7	134
	2010	5	99
Dairy/Livestock	2011	1	2,000 animals
	2010	1	2,000 animals
Olives	2011	7	125
	2010	6	124
Pasture/Range	2011	3	197
	2010	6	4,016
Rice	2011	8	1,531
	2010	11	1,741
Ryegrass	2011	2	449
	2010	2	534
Wheat	2011	5	3006
	2010	4	2,123
Miscellaneous*	2011	19	421
	2010	27	1,277
Processors/Handlers	2011	3	N/A
	2010	3	N/A
Total registered growers, handlers and processors	2011	38	6,048
	2010	42	10,055
		Total acres	

* Includes: beans, blackberries, chestnuts, fallow ground, fruit trees, kiwi, herbs, peas, perisimmon, pistachio, prickly pear, pomegranate, safflower, sorghum, tricale vetch, vegetables and wild rice.

GLENN COUNTY SUSTAINABLE AGRICULTURE

BIOLOGICAL CONTROL

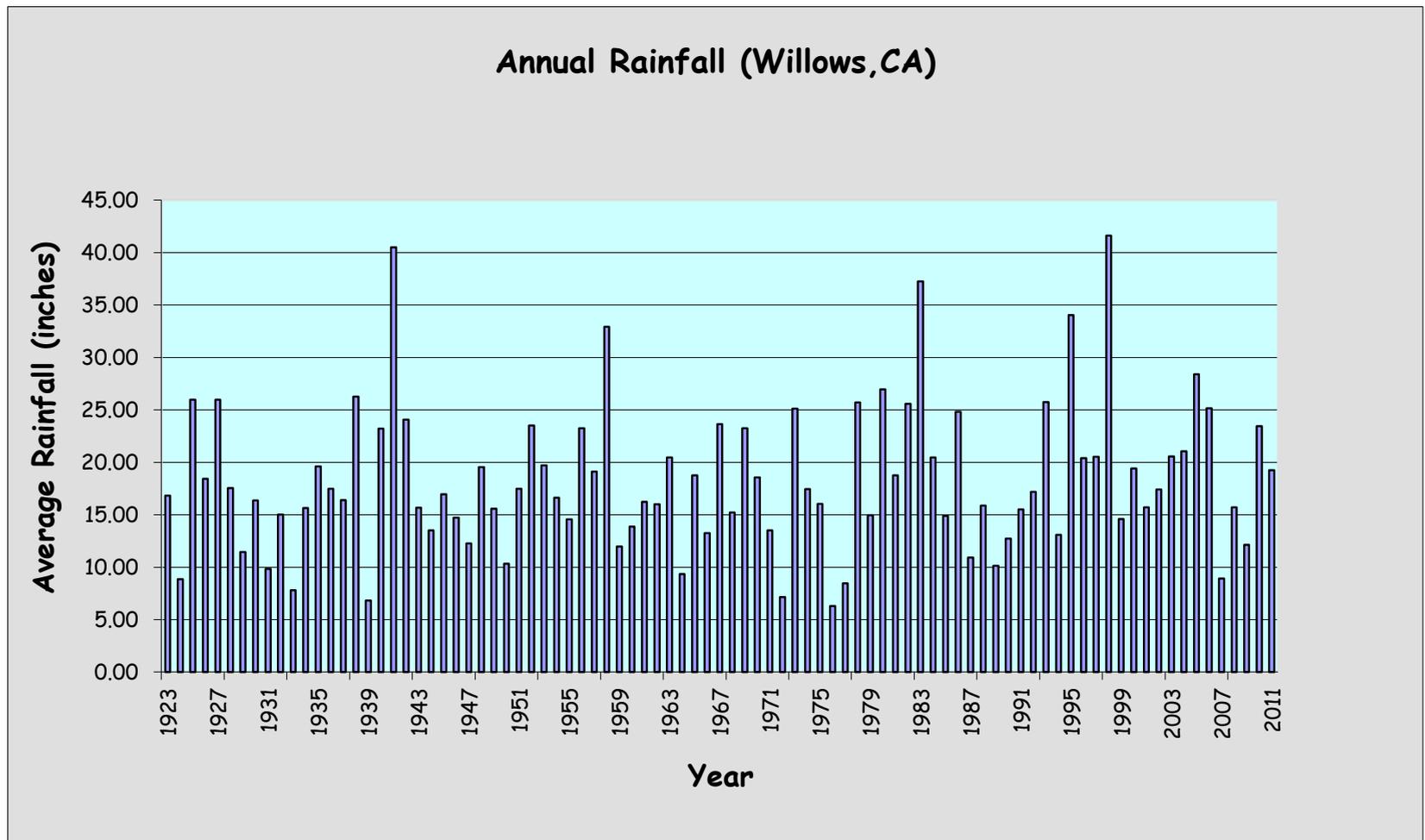
Pest	Control Agent	Program Scope
Ash Whitefly <i>Siphoninus phillyreae</i>	Wasp <i>Encarsia Sp.</i>	Established
	Beetle <i>Clitostethus arcuatus</i>	Established
Italian Thistle <i>Carduus pycnocephalus</i>	Weevil <i>Rhynocyllus conicus</i>	Established
Puncturevine <i>Tribulus terrestris</i>	Stem and Seed Weevils <i>Microlarinus lypriformis</i>	Established
	<i>Microlarinus laeeyniei</i>	Established
Yellow Starthistle <i>Centaurea solstitialis</i>	Weevil <i>Banqasternus orientalis</i>	Established
	<i>Eustenopus villosus</i>	Established
	Fly <i>Urophora sirunaseva</i>	Established
	<i>Chaetorellia australis</i>	Established
Red Gum Lerp Psyllid <i>Glycaspis brimblecombei</i>	Rust <i>Puccinia jaceae</i>	Not established
	Fly <i>Psyllaphaequs bliteus</i>	Established
Saltcedar <i>Tamarix spp.</i>	Beetle <i>Diorhabda elongata</i>	Not established

PEST ERADICATION

Pest	Control Agent	Number of Locations
Canada Thistle <i>Cirsium arvense</i>	Mechanical	2
Dyer's Woad <i>Isatis tinctoria</i>	Chemical/Mechanical	11
Perennial Pepperweed <i>Lepidium latifolium</i>	Chemical/Mechanical	39
Plumeless Thistle <i>Carduus acanthoides</i>	Mechanical	3
Russian Knapweed <i>Acroptilon repens</i>	Chemical	2
Silverleaf Nightshade <i>Solanum elaeagnifolium</i>	Chemical/Mechanical	27
Hoarycress (Whitetop) <i>Cardaria draba</i>	Chemical/Mechanical	10
Purple Starthistle <i>Centaurea calcitrapa</i>	Chemical/Mechanical	2
Diffuse Knapweed <i>Centaurea diffusa</i>	Chemical/Mechanical	1
Klamath Weed <i>Hypericum perforatum</i>	Chemical/Mechanical	4
Spanish Broom <i>Genista juncea</i>	Mechanical	2
Tree of Heaven <i>Ailanthus altissima</i>	Chemical/Mechanical	2

ANNUAL RAINFALL at WILLOWS, CALIFORNIA

Year	Inches	Year	Inches	Year	Inches	Year	Inches
1887 - 1888	8.97	1918 - 1919	12.90	1949 - 1950	10.32	1980 - 1981	18.76
1888 - 1889	10.30	1919 - 1920	7.70	1950 - 1951	17.48	1981 - 1982	25.58
1889 - 1890	29.94	1920 - 1921	21.28	1951 - 1952	23.50	1982 - 1983	37.25
1890 - 1891	19.01	1921 - 1922	13.44	1952 - 1953	19.70	1983 - 1984	20.47
1891 - 1892	18.82	1922 - 1923	16.81	1953 - 1954	16.64	1984 - 1985	14.89
1892 - 1893	27.30	1923 - 1924	8.86	1954 - 1955	14.57	1985 - 1986	24.82
1893 - 1894	11.15	1924 - 1925	25.99	1955 - 1956	23.24	1986 - 1987	10.92
1894 - 1895	26.04	1925 - 1926	18.44	1956 - 1957	19.11	1987 - 1988	15.86
1895 - 1896	22.18	1926 - 1927	25.99	1957 - 1958	32.93	1988 - 1989	10.12
1896 - 1897	18.82	1927 - 1928	17.54	1958 - 1959	11.96	1989 - 1990	12.71
1897 - 1898	6.58	1928 - 1929	11.46	1959 - 1960	13.88	1990 - 1991	15.51
1898 - 1899	13.05	1929 - 1930	16.37	1960 - 1961	16.24	1991 - 1992	17.19
1899 - 1900	15.23	1930 - 1931	9.85	1961 - 1962	16.01	1992 - 1993	25.76
1900 - 1901	17.49	1931 - 1932	15.01	1962 - 1963	20.48	1993 - 1994	13.10
1901 - 1902	21.67	1932 - 1933	7.79	1963 - 1964	9.34	1994 - 1995	34.04
1902 - 1903	17.10	1933 - 1934	15.65	1964 - 1965	18.75	1995 - 1996	20.39
1903 - 1904	20.28	1934 - 1935	19.62	1965 - 1966	13.26	1996 - 1997	20.52
1904 - 1905	24.55	1935 - 1936	17.48	1966 - 1967	23.65	1997 - 1998	41.62
1905 - 1906	19.85	1936 - 1937	16.40	1967 - 1968	15.21	1998 - 1999	14.59
1906 - 1907	17.88	1937 - 1938	26.28	1968 - 1969	23.25	1999 - 2000	19.43
1907 - 1908	13.44	1938 - 1939	6.82	1969 - 1970	18.56	2000 - 2001	15.70
1908 - 1909	22.09	1939 - 1940	23.21	1970 - 1971	13.50	2001 - 2002	17.40
1909 - 1910	14.36	1940 - 1941	40.50	1971 - 1972	7.15	2002 - 2003	20.56
1910 - 1911	17.75	1941 - 1942	24.07	1972 - 1973	25.11	2003 - 2004	21.07
1911 - 1912	11.26	1942 - 1943	15.68	1973 - 1974	17.45	2004 - 2005	28.39
1912 - 1913	13.18	1943 - 1944	13.52	1974 - 1975	16.03	2005 - 2006	25.17
1913 - 1914	29.18	1944 - 1945	16.94	1975 - 1976	6.30	2006 - 2007	8.93
1914 - 1915	27.19	1945 - 1946	14.72	1976 - 1977	8.46	2007 - 2008	15.71
1915 - 1916	18.11	1946 - 1947	12.28	1977 - 1978	25.72	2008 - 2009	12.12
1916 - 1917	11.43	1947 - 1948	19.56	1978 - 1979	14.97	2009 - 2010	23.46
1917 - 1918	11.90	1948 - 1949	15.59	1979 - 1980	26.95	2010 - 2011	19.25



EXPORT COMMODITIES

Commodities Grown and Exported From Glenn County in 2011

Seed:

Alfalfa	Carrot	Gourd	Mustard	Pumpkin	Tomato
Bean	Chili pepper	Leek	Okra	Rice	Watermelon
Broccoli	Coriander	Lettuce	Onion	Safflower	
Cabbage	Corn	Lima bean	Pea	Squash	
Cantaloupe	Cucumber	Melon	Pepper	Sunflower	

Fruit:

Apricot

Lumber:

Walnut

Nuts:

Almond

Pistachio

Walnut



Export Trade Partners of Glenn County in 2011

Algeria	Hong Kong	Romania
Argentina	Hungary	Russian Federation
Australia	India	Saint Vincent & the Grenadines
Austria	Iraq	Saudi Arabia
Bahamas	Israel	Serbia
Bahrain	Italy	Singapore
Barbados	Japan	South Africa
Belgium	Jordan	Spain
Brazil	Kenya	Sudan
Bulgaria	Korea, Republic of	Sweden
Canada	Latvia	Switzerland
Chile	Lebanon	Taiwan
China	Lithuania	Thailand
Costa Rica	Malaysia	Tunisia
Czech Republic	Mexico	Turkey
Denmark	Moldova, Republic of	Ukraine
Dominican Republic	Morocco	United Arab Emirates
Ecuador	Netherlands	United Kingdom
Egypt	New Zealand	Uruguay
Finland	Norway	Venezuela, Bolivarian Republic of
France	Pakistan	Viet Nam
Germany	Peru	Yemen
Greece	Portugal	

STAFF MEMBERS

**Agricultural Commissioner
Sealer of Weights and Measures**

Jim Donnelly

**Assistant Agricultural Commissioner
Assistant Sealer of Weights and Measures**

Jean Miller

**Deputy Agricultural Commissioner
Deputy Sealer of Weights and Measures**

Rey M. Lopez

Water Resource Coordinator

Lester Messina

Environmental Biologists:

Greg Hinton Craig Boschi
Tom Wong Lisa Hunter
Jason Beauchamp

Environmental Biologist Aide:

Dottie LaCroix

Support Staff:

Tina Brothers
Jennifer Kline
Gaylee Curcio

Public Service Employees:

John Tolley
Anthony Galvan
Richard Daniel

Air Pollution Staff:

Kevin Tokunaga Eric Scott
Ian Ledbetter Kathryn McDaniel
Dana Owens Delia Azure

Public Service Employee: Natalie Pacheco



Flooded rice paddy before seedling emergence