

DEPARTMENT OF AGRICULTURAL AND RESOURCE ECONOMICS
DIVISION OF AGRICULTURE AND NATURAL RESOURCES
UNIVERSITY OF CALIFORNIA AT BERKELEY

WORKING PAPER NO. 783

AGRICULTURE IN VENTURA COUNTY
Its Impact on the County Economy

by

Jill McCluskey, Graduate Researcher
and
George Goldman, Economist

Copyright © 1995 by Jill McCluskey and George Goldman. All rights reserved. Readers may make verbatim copies of this document for non-commercial purposes by any means, provided that this copyright notice appears on all such copies.

California Agricultural Experiment Station
Giannini Foundation of Agricultural Economics
November 1995

ABSTRACT

Authors: Jill McCluskey, Graduate Researcher
George Goldman, Cooperative Extension Specialist
Department of Agricultural and Resource Economics
University of California, Berkeley
321 Giannini Hall
Berkeley, CA 94720-3310
Goldman@are.Berkeley.EDU

Pages: 48

Abstract (no more than 100 words)

Biographical information

Keywords (not more than 6 words or phrases to be used to index the article)

Table of Contents

Executive Summary	1
Chapter 1	4
I. Crops	4
Land Use	4
History of Ventura County Crops	6
Acreage by Crop	7
Total Harvested Acres	10
Crop Rankings	12
Productivity: Crop Yields	13
Value of Crops	16
Production Cost Breakdowns: Leading Crops	23
Leading Commodities and Productions Totals	25
Agricultural Production in Tons	27
II. Farmland Characteristics	28
Land in Farms	28
Value of Assets	29
III. People on Farms	31
Farm Ownership and Tenure	31
Age, Gender and Race	32
Net Income	34
Chapter 2	38
I. Who Works in Agriculture	38
Farm Labor Contractors	40
Seasonality of Employment	41
II. Countercyclical Employment in Agriculture	42
III. Affordable Housing for Farm Labor	43
Chapter 3	46
Aggregate Measures of the Food and Fiber Sector	46
Bibliography	48

Executive Summary

California, with a value of \$19.9 billion in 1993 led the United States in agricultural production. Ventura County agricultural production was worth \$848.3 million in 1993 and is in the top fifth of counties in California. Even though only one-fourth of the land in the County is in farms and ranches, Ventura County was ranked eleventh out of fifty-eight counties in California for agricultural production in 1993. Ventura County is one of the five leading counties in California for ten commodities. It leads the state in production of lemons (with 61% of all lemons grown in California), celery and cabbage. Ventura County produces more than forty varieties of fruits and vegetables.

Approximately 27% of the land (nearly 321,000 acres) in Ventura County is occupied by farms and ranches. This compares with about 30% of the land in California. About 31% of the agricultural land in Ventura County is irrigated. Approximately three-fourths of cropland is used to grow fruits and vegetables.

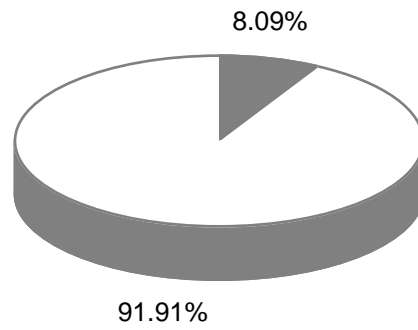
The unique and most valuable feature of the coastal plain of Ventura County is its extremely mild, almost frost-free, Mediterranean climate. The climate is suitable for subtropical fruits, year-round production of several vegetables, and a long harvest season for strawberries. Because of its unique climate and good soil, land in Ventura County has a high value for farming. However, land in Ventura County is also highly valued as real estate. Land value and water price and availability are two of the more critical issues facing agriculture.

In 1992, agriculture and agriculture-related products contributed to Ventura County's economy by providing just over 8% of the county's employment and 8.09% of its personal income.

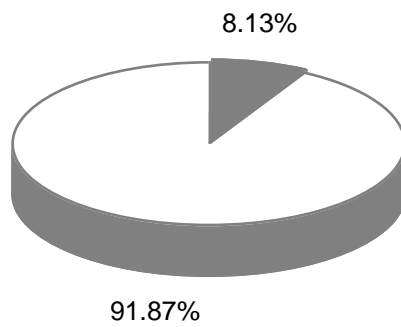
Exhibits A & B

Multiplier Effects - Economic Impacts of the Food and Fiber Industry, 1992

Agriculture and Farm-Related Personal Income



Agriculture and Farm-Related Jobs



Economic Impact of Ventura County Agriculture			
	Income	Value Added	Jobs
	\$1,000	\$1,000	Number
Ventura County	15,088,406	18,146,531	352,200
Agriculture	727,437	783,903	19,652
Agriculture Processing	493,582	526,638	8,989
Total	1,221,019	1,310,541	28,641
Ag. as % of Ventura Co.	8.09%	7.22%	8.13%
Sources for Data:			
1.	Ventura County Personal Income, 1992: California Department of Finance, Sacramento		
2.	Ventura County Value Added, 1992: Estimated applying ratio of California State Product to Personal Income in 1989 to Ventura County Personal Income in 1992.		
3.	Ventura County Employment, 1992: California Employment Development Department, Sacramento		

Statistics alone cannot satisfactorily characterize agriculture in Ventura County. It is best described as a highly efficient and productive system that benefits from a favorable combination of climate, land, capital, and dedicated, knowledgeable agriculturists who use the latest techniques in production and water conservation.

Chapter 1

Farms and Farmer Characteristics

I. Crops

Land Use

Farms and ranches occupy 321,000 acres in Ventura County, which is 26.9 percent of county land. Cropland (which includes harvested cropland, cropland used for pastures, and other cropland) accounts for 131,000 acres or 40.8 percent of land in farms and ranches. In 1974, the definition of a farm was changed¹.

Table 1
Division of the Land

Ventura County	Total Land Area (1000 acres)	Land in Farms and Ranches (1000 acres)	% of Total Land	Total Cropland* (1000 acres)	Cropland as a % of Farms and Ranches	Woodland (1000 acres)	Woodland as a % of Farms and Ranches	Other Land** (1000 acres)	Other as a % of Farms and Ranches
1964	1,192	437	36.66	158	36.16	7	1.60	272	62.24
1969	1,192	433	36.33	144	33.26	5	1.15	284	65.59
1974	1,192	310	26.01	128	41.29	5	1.61	177	57.10
1978	1,192	340	28.52	140	41.18	15	4.41	185	54.41
1982	1,192	301	25.25	136	45.18	10	3.32	141	46.84
1987	1,192	329	27.60	134	40.73	12	3.65	183	55.62
1992	1,192	321	26.93	131	40.81	5	1.55	185	57.63
<u>California</u>									
1964	100,207	37,012	36.94	11,815	31.92	3,403	9.19	21,793	58.88
1969	100,069	35,328	35.30	11,245	31.83	2,038	5.77	22,045	62.40
1974	100,069	33,386	33.36	10,630	31.84	1,522	4.56	21,234	63.60
1978	100,070	32,327	32.30	11,455	35.43	1,365	4.22	19,908	61.58
1982	100,031	32,157	32.15	11,257	35.01	1,483	4.61	19,416	60.38
1987	100,031	30,598	30.59	10,895	35.61	1,351	4.42	18,352	59.98
1992	100,031	28,979	28.97	10,479	36.16	1,150	3.97	17,349	59.87

*Includes harvested cropland, cropland used for pastures, and other cropland.

**Includes pasture land, rangeland, houses and barns, lots, ponds, roads, and wasteland.

Source: U.S. Bureau of the Census, *Census of Agriculture: California*, various years

¹The definition of a farm which has been used in the Census of Agriculture since 1974 is any agricultural operation whose production is valued at greater than or equal to \$1,000. The definition used before 1974 had a minimum value on production of \$500. This decreases the number of farms because farms with production below \$1000 are not counted.

Port of Hueneme

The deep water Port of Hueneme enables Ventura County farmers to ship their products abroad from a location within Ventura County. Export activity at the Port of Hueneme consists exclusively of agricultural products. Citrus growers have especially taken advantage of this lower cost alternative for shipping their product to Asia. Port Hueneme not only reduces the transportation costs involved in getting an agricultural product to market, but also provides high-paying jobs for Ventura County. Built in 1870, the Port of Hueneme in Ventura County is the only deep water port between Los Angeles and San Francisco. It is located on a projection into sea about twelve miles north of Point Mugu.

In February of 1992, the Port of Hueneme became an official "Port of Entry" under the U.S. Department of Customs.² The Port handles "break bulk" cartons like those used for shipping citrus. Fresh fruit exports are at an all-time high of 178,409 tons in fiscal year 1994 and are expected to continue growing. The reason for this explosion in export activity is that in December of 1993, Sunkist Growers switched from using the Port of Long Beach to the Port of Hueneme.

When the UCSB Economic Forecast Project did an Economic base study of the Oxnard-Port Hueneme area, they pointed out that "[r]elatively very high salaries for the employment of longshoremen are paid to Port workers. The monthly number of registered longshoremen, clerks, and foremen is 93 in 1994. The average annual salary for registered longshoremen was \$48,248 in 1993. Including clerks and foremen, salaries for Port workers averaged \$52,291 in 1993."³

²Economic Base Study Oxnard-Port Hueneme Area, p. 23.

³Economic Base Study Oxnard-Port Hueneme Area, p. 24.

History of Ventura County Crops

In 1542 Juan Cabrillo landed on the shore of what is now Ventura County, during his explorations of the California coast. Over 200 years later, in 1782, Missionaries came to this same area and established Mission San Buenaventura. They brought in sheep, cattle, and crops from the Mediterranean. Other plants, especially rangeland grasses and forbes and cropland weeds, were introduced unintentionally and spread over both wild and cultivated lands.

Walnuts and lemons were introduced in 1867. In 1880 to 1910, barley for grain and hay, and oats were grown on over 60,000 acres without irrigation. These crops can still be grown without irrigation on as much as 10,000 acres of hilly land in years with near or above average rainfall. In the 1880's, figs, prunes, and apples were tried, but none became important crops. Lima beans were introduced in 1868, and exceeded 50,000 acres in some years between 1900 and 1943. After the early 1940's, lima bean acreage declined steadily. Following the building of a sugar factory in 1899, there were about 11,000 acres of sugar beets. Sugar beet acreage fell to two to three thousand acres in the late 1960's and early 1970's, and almost none since 1985.⁴ (See Oxnard Brothers' story on page 40 for more about sugar beets.)

In terms of both acreage and production value, lemons are currently number one in Ventura County. Lemons first became the highest-valued commodity in 1930 and have stayed in the number one spot since 1947. In recent years, the number two and three commodities have been celery and strawberries. Strawberries were first planted in Ventura County in 1929. Acreage was first reported in the Ventura County Crop reports in 1940 when strawberries acreage totaled 5 acres with a total value of \$5,520. By 1951, strawberry acreage had only increased to eleven acres with a crop value of \$16,357. In the following ten years there was a great expansion with strawberry plantings occupying 520 acres with a value of \$1.7 million.

The early cultural practice for strawberry production was to fumigate the fields in alternate strips. After twenty-four hours, the tarp from the fumigated strip was removed and the other strips were fumigated. This meant going over the field twice.

⁴Cooperative Extension, University of California, Ventura County

In later years, the industry perfected a procedure that is called the "continuous tarp method" of fumigation. The applicator laid the first strip, then glued the next tarp edge to the edge of the tarp in place with the opposite edge buried. This method required only one trip over the field which helped to cut costs and lessened soil compaction in the fields.

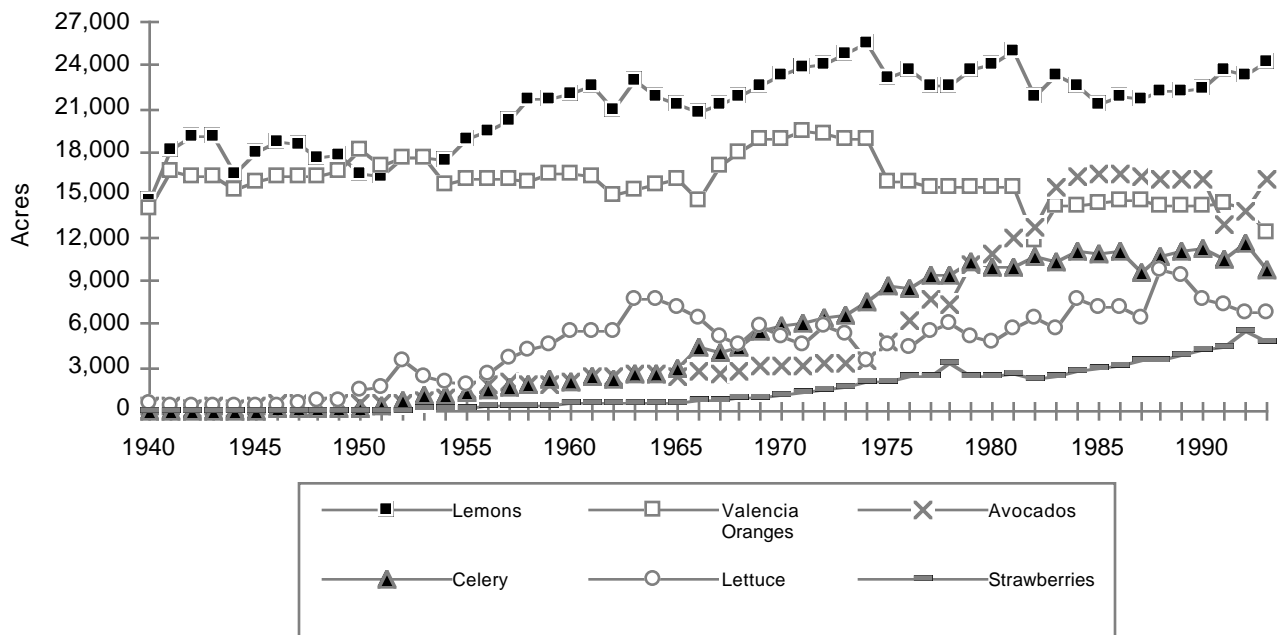
Celery was first planted in 1923 with a total production of 155 tons. Celery did not appear to be grown again until 1934, with about fifty acres of celery grown steadily for about the next ten years. By 1951, the acreage had increased to 403 acres. In the early 1960's, celery and strawberries became two of the major row crops in the county. Cultural and harvesting practices also changed drastically in the early 1960's for celery. The early harvesting practice for celery was to cut the celery, place it in bins, and transport it to a packing house for washing, trimming and packing. In later years, celery growers packed the celery in the field.⁵

Acreage by Crop

Acreage reported in the tables and graphs means acreage harvested. Therefore, an increase in vegetable crop acreage may signify more double cropping, not additional land in production. Double cropping occurs when the same land is used for two growing cycles in the same year. Total harvested acres are therefore greater than acres cultivated. In Ventura County, on average about 20,000 acres of vegetables are double cropped. There is no significant triple cropping in Ventura County. Lemons are the leader in the use of cropland with 18% of all cropland. Avocados and Valencia Oranges round out the top three crops for cropland acreage. Vegetable acreage increased steadily from less than 10,000 in 1945 to over 40,000 in 1960. Then it increased slowly to 59,685 acres in 1984.

⁵History of Ventura County celery and strawberries paraphrased from the *Ventura County Agricultural Commissioner's Report, 1988*.

Figure 1
Ventura County Crop Acreage
(Harvested Acres)



Source: Ventura County Agricultural Commissioner's Reports.

Table 2 Ventura County Crop Acreage, Selected Crops
(Harvested Acres)

<u>Year</u>	<u>Lemons</u>	Valencia <u>Oranges</u>	<u>Avocados</u>	<u>Celery</u>	<u>Lettuce</u>	<u>Strawberries</u>	<u>Broccoli</u>	<u>Cabbage</u>
1940	14,652	14,080	312	55	475	0	0	150
1941	18,152	16,586	325	0	420	0	0	200
1942	19,004	16,332	231	36	330	4	0	200
1943	19,004	16,332	258	23	250	0	0	110
1944	16,446	15,321	231	35	250	0	44	90
1945	17,954	15,919	379	55	312	0	100	287
1946	18,670	16,374	430	57	357	0	112	19
1947	18,588	16,374	430	65	430	0	76	31
1948	17,620	16,295	422	69	660	14	106	65
1949	17,708	16,756	470	155	797	0	152	238
1950	16,537	18,081	497	159	1,478	0	242	284
1951	16,318	17,033	512	403	1,581	11	401	405
1952	17,631	17,532	548	693	3,519	54	925	348
1953	17,631	17,532	700	1,003	2,427	137	1,080	266
1954	17,339	15,827	807	1,147	1,980	150	789	183
1955	18,799	16,070	1,365	1,299	1,829	141	889	433
1956	19,496	16,146	1,841	1,486	2,500	310	1,747	960
1957	20,260	16,086	1,977	1,601	3,692	301	1,686	1,107
1958	21,670	15,986	1,766	1,739	4,221	310	1,435	1,757
1959	21,728	16,436	1,829	2,210	4,572	334	2,360	1,908
1960	22,009	16,480	2,084	2,017	5,485	530	3,014	1,954
1961	22,656	16,320	2,375	2,424	5,542	520	2,106	1,359
1962	20,886	15,055	2,337	2,190	5,468	461	1,520	2,312
1963	22,895	15,436	2,574	2,574	7,746	480	1,509	2,261
1964	21,876	15,687	2,649	2,649	7,723	489	1,693	2,350
1965	21,289	16,146	2,359	2,855	7,125	535	1,562	2,667
1966	20,770	14,679	2,661	4,330	6,550	617	2,030	2,330
1967	21,245	16,971	2,613	4,029	5,107	701	2,318	2,389
1968	21,878	17,962	2,785	4,440	4,650	858	2,040	2,495
1969	22,550	18,940	3,060	5,440	5,820	915	2,260	2,160
1970	23,380	18,830	3,070	5,940	5,210	1,040	2,060	2,670
1971	23,868	19,374	3,155	6,147	4,614	1,273	3,406	3,617
1972	24,033	19,215	3,279	6,516	5,927	1,429	3,728	2,891
1973	24,870	18,878	3,387	6,716	5,437	1,606	2,090	2,924
1974	25,513	18,884	3,497	7,534	3,518	2,011	4,492	3,172
1975	23,098	15,879	4,720	8,739	4,688	2,050	3,561	3,100
1976	23,697	15,849	6,212	8,558	4,504	2,290	3,149	2,122
1977	22,609	15,571	7,768	9,437	5,615	2,430	5,011	1,548
1978	22,530	15,502	7,416	9,481	6,157	3,230	4,320	1,760
1979	23,647	15,580	10,187	10,309	5,247	2,383	2,649	1,604
1980	24,147	15,633	10,917	9,934	4,696	2,419	2,704	1,727
1981	24,947	15,533	12,100	10,011	5,703	2,535	2,708	1,554
1982	21,824	11,819	12,748	10,793	6,387	2,227	6,260	1,832
1983	23,295	14,204	15,636	10,290	5,637	2,300	4,653	1,781
1984	22,620	14,310	16,251	11,079	7,686	2,760	4,589	1,984
1985	21,340	14,424	16,448	10,976	7,220	3,006	6,394	1,620
1986	21,806	14,535	16,503	11,075	7,178	3,027	4,686	2,409
1987	21,669	14,535	16,303	9,615	6,390	3,468	4,985	2,004
1988	22,169	14,245	16,103	10,650	9,792	3,500	2,481	3,134
1989	22,285	14,245	16,170	11,100	9,342	3,938	2,429	2,432
1990	22,381	14,294	16,198	11,242	7,842	4,200	2,791	1,590
1991	23,630	14,355	12,926	10,528	7,368	4,435	4,457	2,503
1992	23,369	14,006	13,911	11,723	6,826	5,550	4,600	2,757
1993	24,239	12,325	16,199	9,878	6,824	4,795	4,632	2,202

Source: Ventura County Agricultural Commissioner's Report

Total Harvested Acres

Harvested acres of higher-value fruits and vegetables, such as avocados, broccoli and lettuce, have increased, while harvested acres of low-value field crops have decreased. It should be noted that acreage of pasture, nursery stock, cut flowers are not included in Table 3. Harvested acres should be slightly larger than irrigated acres.

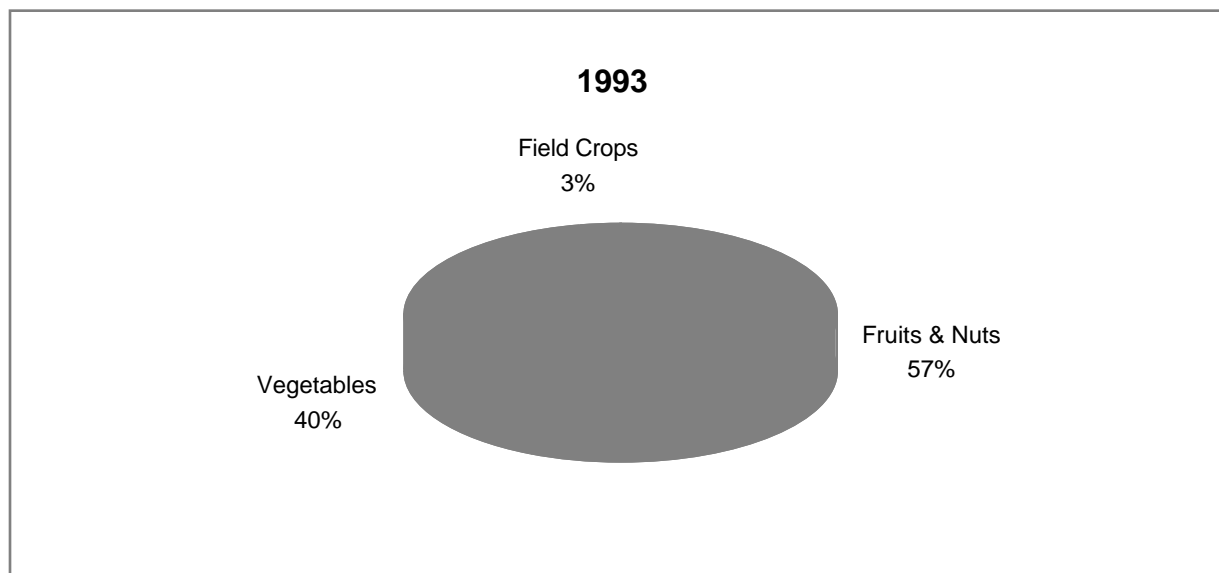
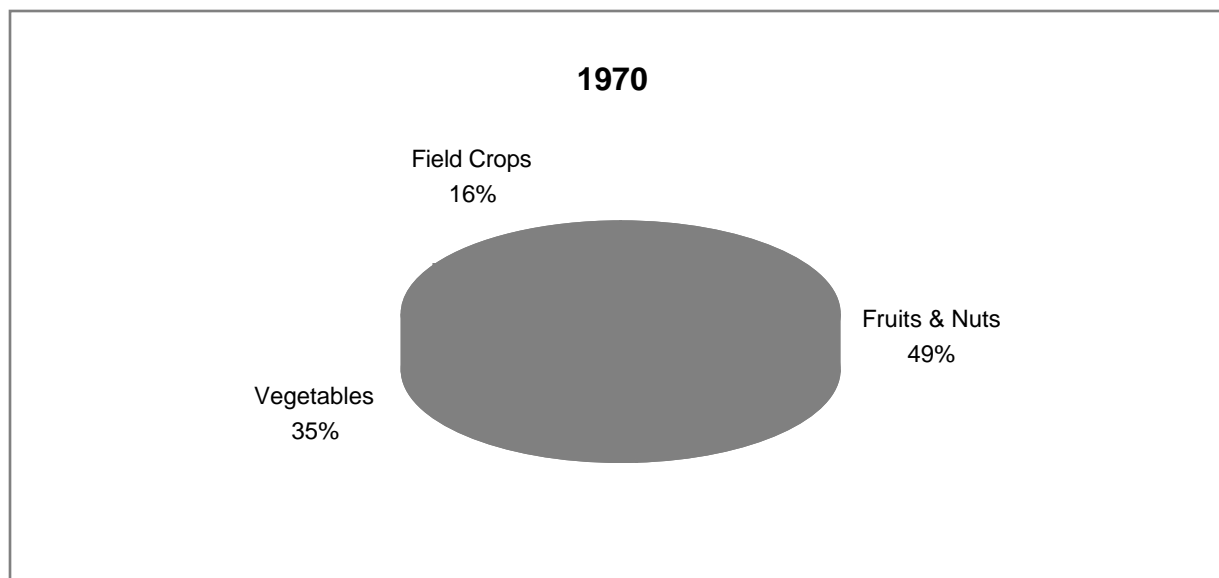
Table 3
Ventura County Harvested Acres
by commodity group

<u>Year</u>	<u>Fruits & Nuts</u>	<u>Vegetables</u>	<u>Field Crops</u>	<u>Total</u>
1970	51,966	37,000	17,120	106,086
1971	52,743	41,580	29,309	123,632
1972	52,833	45,880	20,026	118,739
1973	53,520	43,239	23,410	120,169
1974	54,222	45,340	26,854	126,416
1975	49,282	48,874	29,805	127,961
1976	51,895	39,901	21,987	113,783
1977	52,393	46,752	22,740	121,885
1978	52,934	46,829	20,473	120,236
1979	56,138	49,467	17,063	122,668
1980	57,676	43,408	18,836	119,920
1981	59,675	45,176	14,547	119,398
1982	55,064	52,255	13,454	120,773
1983	59,217	49,851	14,760	123,828
1984	59,575	59,685	10,507	129,767
1985	58,575	58,099	10,004	126,678
1986	59,608	51,163	9,829	120,600
1987	59,076	47,012	7,467	113,555
1988	58,714	48,962	6,707	114,383
1989	59,286	47,264	7,076	113,626
1990	59,721	46,725	2,632	109,078
1991	58,238	47,109	3,282	108,629
1992	59,122	46,522	3,287	108,931
1993	59,685	41,798	3,629	105,112

Source: Ventura County Agricultural Commissioner's Reports

Exhibits C & D

Composition of Ventura County Harvested Acres



Crop Rankings

Ventura County agriculture exhibits a great deal of diversity. It produces more than forty varieties of fruits and vegetables. There are thirty farm products with sales in excess of a million dollars. Ventura County leads the state in three commodities for production value: lemons, cabbage, and celery. It is one of the top five counties in California for ten commodities.

Table 4
Ventura County Rankings
in California Farm Commodities

All Commodities	12
All Vegetables	5
Cabbage	1
Celery	1
Lemons	1
Spinach	2
Strawberries	2
Avocados	3
Cucumbers	4
Broccoli	5
Cauliflower	5
Nursery Products	5

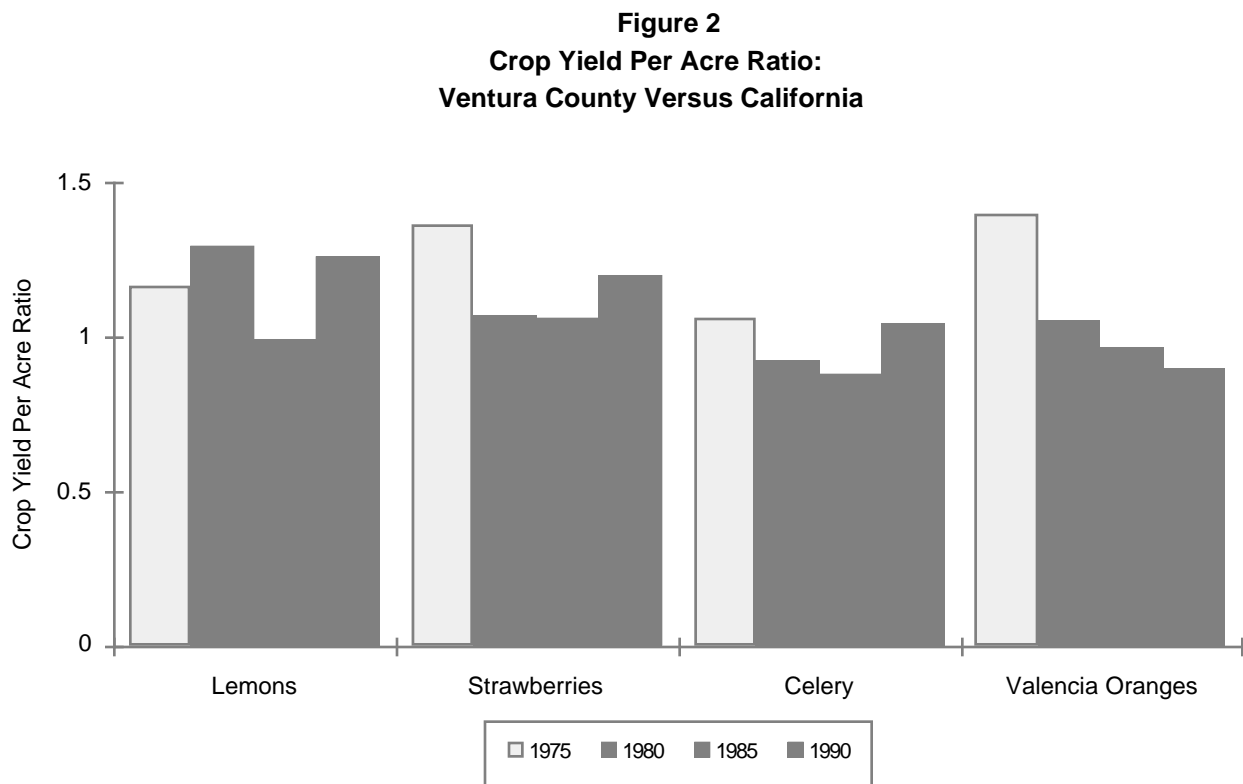
Source: California Agricultural Statistics Services, *Summary of Agricultural Commissioners' Reports*, 1992

The importance of Ventura County agriculture to California is clear. Ventura County ranks fifth among counties in California in vegetable production. Ventura County produces 61% of all lemons grown in California, 43% of celery, 29% of cabbage, and almost 20% of strawberries. On the national level, Ventura County produces 47% of all lemons and almost 15% of strawberries.

Productivity: Crop Yields

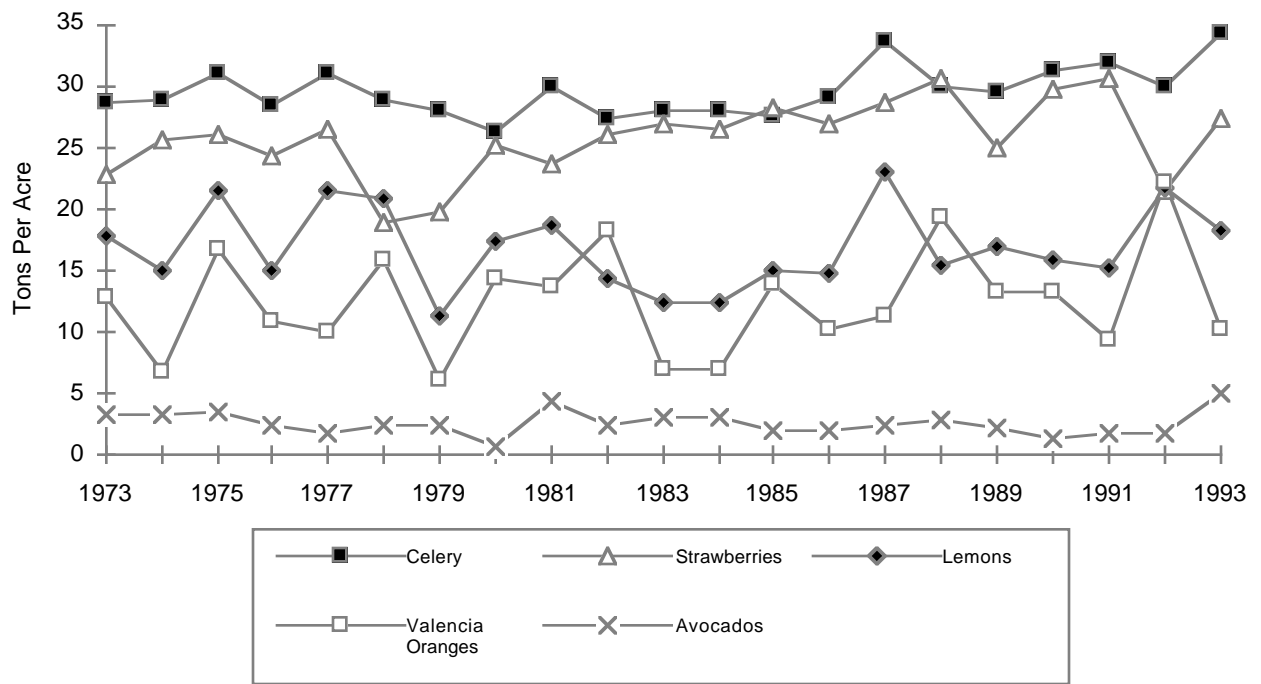
Crop yields per acre have increased for Ventura County's leading crops over the past two decades. Comparing 1973 crop yields per acre with 1993 yields per acre, the avocado crop yield per acre has increased the most with a 50% increase, owing to a large number of young plantings. The increases in crop yields per acre for other leading crops are not as dramatic. The crop yield per acre for lemons increased by 2%; for strawberries, the increase was 19%; and for celery, it was 20%.

Ventura County crop yields per acre for these selected crops are slightly better than statewide yields on average. The 1990 ratio of Ventura County crop yields per acre to California crop yields per acre for lemons, celery, strawberries, avocados and Valencia oranges are respectively as follows: 1.26, 1.05, 1.20, 0.93, and 0.90. The average ratio of Ventura County crop yields per acre to California crop yields per acre for the same crops over the last twenty years are respectively, 1.20, 0.98, 1.13, 0.89, and 1.11. Figure 3 (below) shows the ratio of Ventura County crop yields per acre to California crop yields per acre for selected years.



Source: Ventura County Agricultural Commissioner's Reports.

Figure 3
Ventura County Crop Yield Per Acre



Source: Ventura County Agricultural Commissioner's Reports.

Table 5
Crop Yields Per Acre (tons)
Ventura County

Year	Celery	Strawberries	Lemons	Valencia Oranges	Avocados
1973	28.6	22.9	17.9	12.9	3.4
1974	29.0	25.7	15.0	6.8	3.3
1975	31.0	26.0	21.5	16.7	3.6
1976	28.5	24.4	15.1	10.9	2.5
1977	31.0	26.5	21.5	10.1	1.8
1978	29.0	19.0	20.9	15.8	2.4
1979	28.0	19.8	11.3	6.2	2.4
1980	26.4	25.2	17.5	14.3	0.8
1981	30.0	23.7	18.7	13.8	4.3
1982	27.5	26.0	14.3	18.3	2.5
1983	28.0	27.0	12.4	6.9	3.2
1984	28.0	26.6	12.4	6.9	3.2
1985	27.6	28.2	15.1	14.0	2.1
1986	29.1	27.0	14.8	10.2	2.1
1987	33.6	28.8	23.0	11.4	2.4
1988	30.1	30.6	15.4	19.3	2.8
1989	29.5	25.0	16.9	13.3	2.2
1990	31.4	29.8	15.9	13.2	1.3
1991	31.9	30.6	15.2	9.5	1.7
1992	30.1	21.6	21.7	22.1	1.7
1993	34.3	27.3	18.2	10.2	5.1
California					
1973	28.5	19.8	16.3	10.0	3.6
1974	29.0	21.5	13.0	8.0	2.6
1975	29.1	19.0	18.5	11.9	4.4
1976	28.1	19.5	12.2	11.1	2.3
1977	29.0	22.5	16.3	10.2	4.1
1978	27.5	19.5	16.4	11.3	3.1
1979	27.2	20.5	10.6	8.2	3.1
1980	28.5	23.5	13.5	13.6	1.7
1981	28.9	24.8	18.0	14.1	5.0
1982	31.2	28.0	13.0	8.0	2.4
1983	30.9	24.0	15.2	19.9	2.9
1984	31.4	26.8	12.7	8.1	3.4
1985	31.2	26.5	15.2	14.5	2.6
1986	29.7	25.3	11.8	11.6	2.2
1987	29.8	23.5	16.9	13.1	3.7
1988	32.7	22.5	13.2	15.5	2.4
1989	33.5	21.3	12.7	13.4	2.2
1990	29.9	24.8	12.6	14.7	1.4
1991	33.5	24.8	12.1	5.3	1.8
1992	33.5	24.8	12.4	17.3	2.1

Source: Ventura County Agricultural Commissioners Reports and California Crop and Livestock Reporting Service

Value of Crops

Ventura County agriculture is characterized by high-value cash crops that use advanced levels of technology, capital, and management. Ventura County agriculture is concentrated in higher-valued fruits and vegetables. This switch to high-value crops and high per-acre yields partially explain Ventura County's consistently high cash receipts.

Development in Ventura County has caused the value of land to increase in recent years. Increasing costs for land and water may explain some of the shift to high-value crops in Ventura County. The economic argument is as the value of land increases, the returns to the land must also increase. Otherwise, the land may eventually be sold and used in the higher-valued capacity. Agriculture has continued to flourish in Ventura County partly because the County's natural resources have allowed it to produce high-valued crops.

Ventura County's mild, frost-free Mediterranean climate is suitable and reliable for several crops that can only be grown in a small part of the world. The climate makes it possible for the irrigated land in the county to produce agricultural products with high value. Since Ventura County is a coastal community with a mild climate that is close to Los Angeles, it is a desirable place to live. Property values have been bid up in Ventura County relative to the rest of California and the U.S. Much of this may be caused by speculation. If farmers did not inherit the land they are working, then they need to grow crops that require Ventura's unique climate in order to afford the high price or rent they must pay for the land.

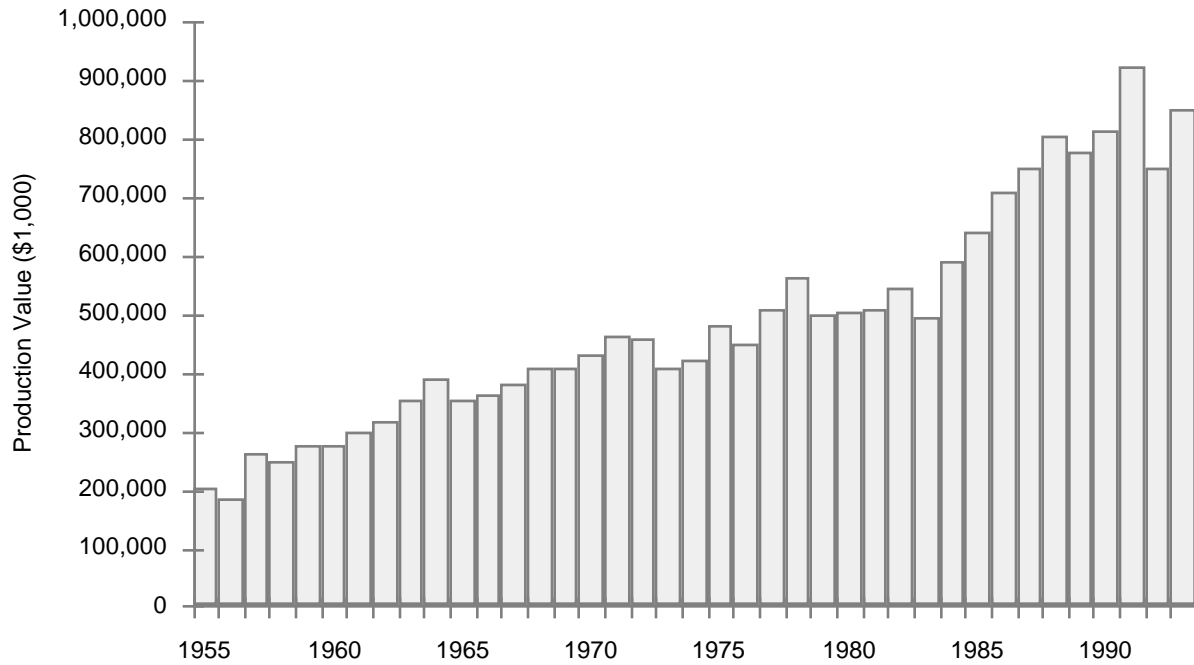
Seaside Banana Gardens

Doug Richardson operates the nation's only commercial banana farm outside of Hawaii on a narrow 11-acre strip between the Pacific Ocean and protective bluffs in Ventura County just north of the City of Ventura. The warm climate is somewhat similar to tropical conditions. Seaside Banana Gardens organically grow fifty varieties of bananas. They offer free banana tastings and mail order services.

Seaside Banana Gardens were recently featured in the *New York Times*.⁶ The *New York Times* article has given the company access to national and international markets through his mail order business. The mail order business has grown to between ten and fifteen percent of his business. Seaside Banana Gardens also supplies exotic varieties of bananas to local natural food stores. About half of his customers are Ventura County residents. Richardson would like to expand his operation within Ventura County. It takes from one-and-a-half to two years for a banana plant to start producing.

⁶*New York Times*, April 5, 1995, p. B6.

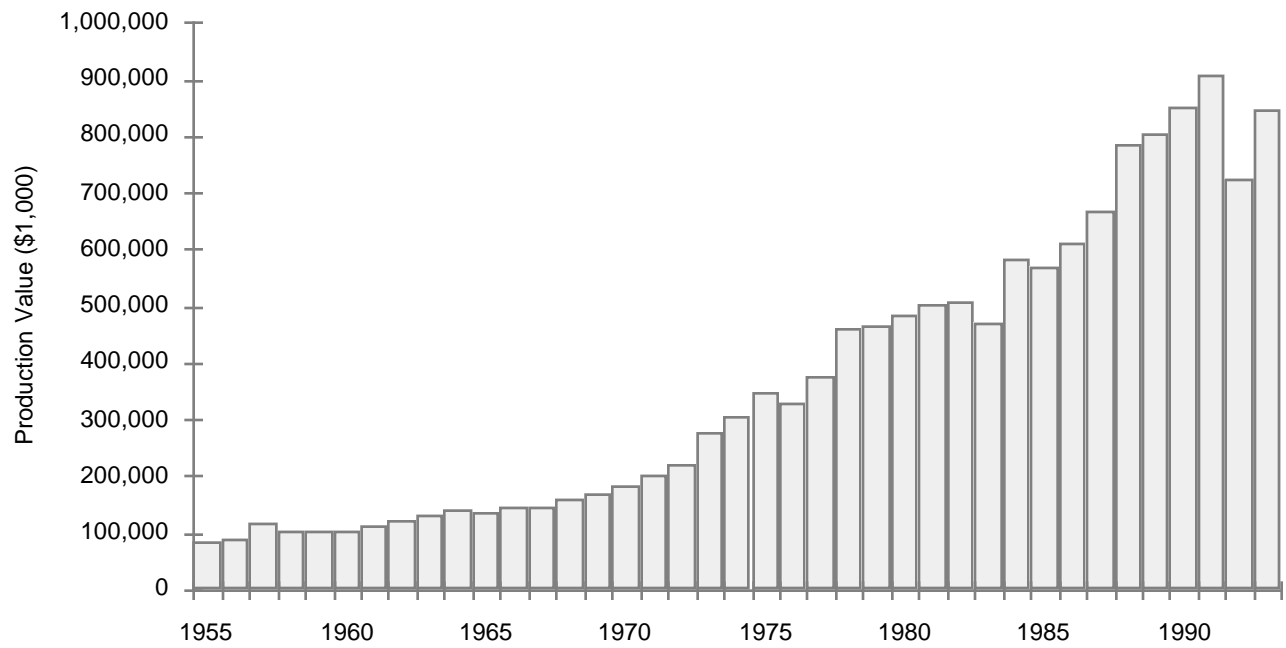
Figure 4
Value of Ventura County Agricultural Production
1993 Constant Dollars



(1993=100) Producer Price Index for Farm Products from the 1994 Economic Report of the President.
Source: Ventura County Agricultural Commissioner's Reports.

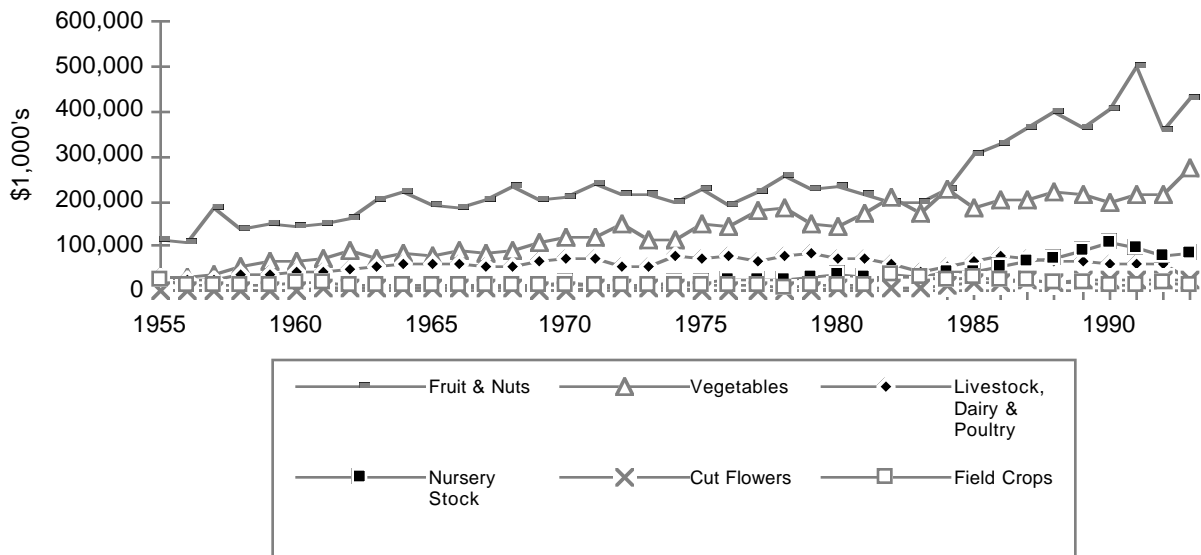
The total value in constant dollars (**constant dollars are dollars adjusted for inflation**) of Ventura County's agricultural production has been following an upward trend since at least the 1930's.

Figure 5
Value of Ventura County Agricultural Production
Nominal Dollars



Source: Ventura County Agricultural Commissioner's Reports.

Figure 6
Value of Ventura County Agricultural Commodities
1993 Constant Dollars



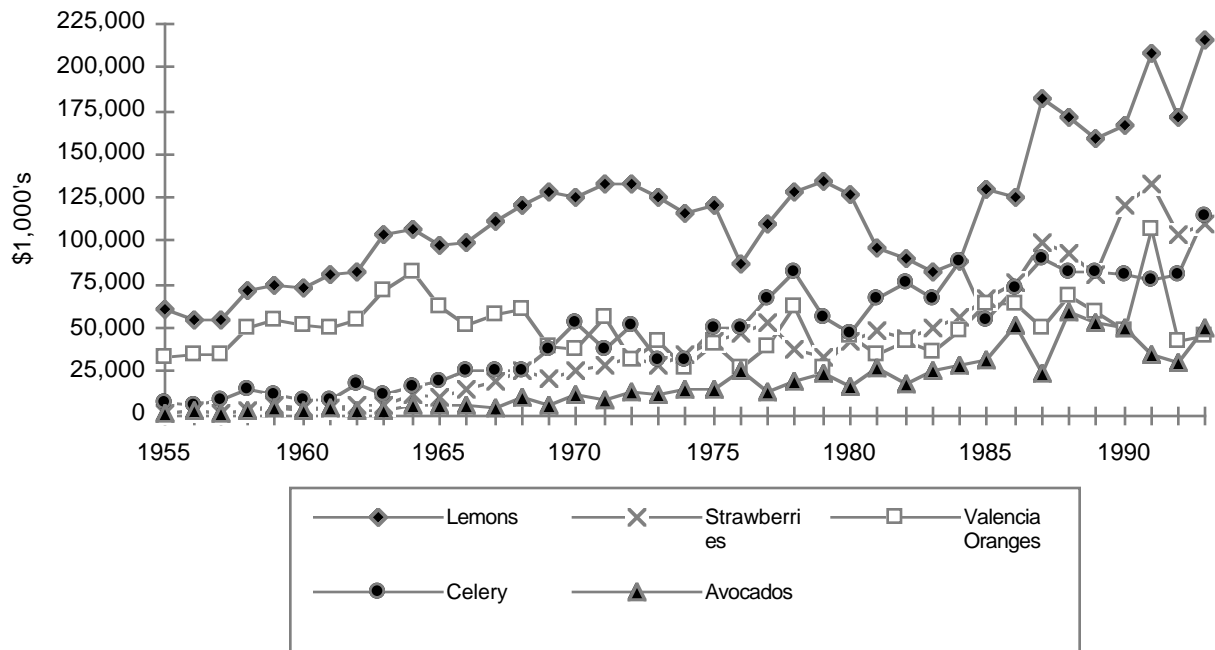
Source: Ventura County Agricultural Commissioner's Reports

(1993=100) Producer Price Index for Farm Products from 1994 Economic Report of the President.

Strawberries have made the greatest gains in production in the last fifty years. In the early 1940's almost no strawberries were grown in Ventura County. Adjusting for inflation⁷, the 1993 value of strawberry production is 136 times as large as the 1955 value. Avocados come in second for increases in value with an inflation adjusted production value ratio of 1993 to 1955 of 36.2. Production of Valencia Oranges has been flat relative to lemons.

⁷Nominal values were converted to real values by using the Producer Price Index for Farm Products.

Figure 7
Ventura County Production Values for Selected Crops
1993 Constant Dollars



Source: Ventura County Agricultural Commissioner's Reports.

(1993=100) Producer Price Index for Farm Products from the 1994 Economic Report of the President.

In the last fifty years, high-valued crops such as strawberries and avocados have shown the greatest increases. Once negligible commodities, strawberries and avocados are now 13% and 10%, respectively, of total production.

Table 6
Ventura County
Constant Dollar Production Value of Selected Crops (\$)

Year	avocados	v. oranges	lemons	strawberries	cabbage	celery	lettuce
1955	1,377,053	34,027,840	60,354,266	816,693	884,280	7,397,544	2,403,307
1956	1,982,048	35,367,925	55,369,225	2,560,796	1,190,428	4,997,697	2,615,099
1957	1,393,162	35,054,952	54,770,679	1,037,988	2,154,501	8,071,968	5,083,690
1958	3,002,653	49,896,812	71,944,420	2,343,890	2,843,183	15,257,312	4,652,375
1959	3,631,656	54,718,049	75,207,966	5,027,149	3,905,571	11,176,471	6,906,287
1960	3,248,741	51,115,614	73,701,825	4,761,566	2,937,284	9,238,754	7,462,994
1961	4,549,865	49,840,431	81,075,472	4,752,022	2,761,725	9,407,008	9,563,342
1962	2,938,559	54,961,864	82,343,750	5,339,778	6,495,498	17,799,258	12,023,305
1963	3,357,741	72,086,733	104,312,618	6,133,748	2,354,499	11,302,891	12,666,577
1964	5,164,335	82,283,128	106,750,343	11,182,442	3,946,091	16,786,008	14,320,165
1965	5,077,024	63,130,126	97,319,401	9,706,362	4,511,830	20,079,653	11,919,295
1966	5,950,049	52,137,610	98,611,655	14,135,651	4,122,429	26,285,504	11,900,098
1967	4,422,280	57,450,777	111,058,290	19,702,073	4,155,440	26,093,264	8,195,078
1968	9,822,919	60,844,928	121,110,549	24,857,071	3,943,081	25,135,340	6,903,618
1969	5,133,143	39,919,163	129,044,223	21,600,095	4,234,427	37,803,138	13,899,192
1970	11,813,084	38,401,869	125,799,065	25,007,009	6,485,981	52,873,832	11,028,037
1971	8,433,984	56,670,494	132,491,389	29,005,970	7,432,836	38,110,218	14,557,979
1972	13,209,664	32,371,215	132,309,000	32,991,290	6,217,545	51,336,168	17,225,218
1973	11,242,861	41,747,719	124,783,633	28,226,818	6,476,303	32,512,511	15,952,164
1974	14,553,774	27,421,344	115,366,326	34,804,119	5,274,399	31,694,222	8,421,482
1975	15,495,831	41,442,051	120,907,032	41,874,236	8,288,077	49,694,275	10,380,906
1976	26,195,410	27,547,121	87,297,121	46,335,823	3,680,065	49,681,559	10,963,607
1977	13,877,779	39,146,746	109,207,923	52,758,658	7,209,406	67,410,726	15,014,688
1978	20,066,008	62,490,605	127,948,389	37,312,836	4,947,657	81,854,075	21,875,915
1979	23,730,125	26,712,505	134,250,107	33,478,728	5,464,439	56,750,430	10,964,761
1980	16,511,386	45,648,331	126,636,165	41,855,048	4,168,660	47,795,570	12,701,466
1981	27,563,059	35,316,314	96,184,906	48,872,050	3,733,727	67,574,247	16,590,724
1982	17,187,032	42,425,637	90,333,833	43,728,868	5,548,898	75,705,114	25,599,187
1983	25,937,304	37,018,809	82,357,367	49,797,283	4,880,878	66,578,892	19,293,626
1984	28,659,229	49,179,513	89,062,880	56,693,712	10,594,320	87,743,408	22,589,249
1985	31,575,158	63,880,513	130,481,548	67,608,011	3,952,520	55,268,902	23,044,554
1986	52,201,106	64,126,929	124,588,804	76,520,387	8,661,599	73,089,150	25,274,130
1987	23,470,028	50,528,852	182,313,725	99,056,583	6,151,261	89,276,190	22,782,073
1988	59,164,627	67,922,277	172,049,164	92,835,577	15,212,158	82,814,157	38,791,310
1989	53,260,324	59,955,616	158,668,468	81,577,576	9,320,726	82,445,967	28,930,915
1990	50,887,850	48,785,047	166,890,139	120,555,026	5,877,360	80,538,814	23,416,937
1991	34,516,651	106,401,458	208,500,860	132,332,220	8,985,727	77,065,492	28,002,834
1992	30,923,363	42,774,220	171,576,121	104,489,775	10,988,432	81,507,953	24,304,896
1993	49,906,000	45,034,000	216,129,000	110,447,000	8,975,000	113,823,000	28,704,000

Source: Ventura County Agricultural Commissioner's Reports

Production Cost Breakdowns: Leading Crops

The cost of production varies greatly among different crops. Within each crop group there are differences which are caused by variations in the components that make up the cost of production. Examples of these variations at different farming operations are water prices, cost of pest control, and frost protection.

Table 7 Lemon Cultural and Overhead Costs Per Acre Ventura County 1992	
Item	Typical Cost \$ per Acre
Cultural Operation Costs (Labor + Material + Equipment)	
Fertilization: Nitrogen	110.00
Minor Elements	36.00
Leaf Analysis	5.00
Irrigation: Labor	100.00
Water @ 2.0 Acre-feet/acre	300.00
Insect and Mite Control	290.00
Snail Control (baiting)	55.00
Disease: Copper Spray for Brown Rot	50.00
Weed Control	75.00
Frost Protection	75.00
Tree Replacement	22.00
Erosion Control	10.00
Pruning	505.00
Miscellaneous	45.00
Total Cultural Costs	1,678.00
Overhead	545.00
Total Costs	2,223.00
Source: Cooperative Extension, Ventura County, University of California, Ventura County Agricultural Data	

Table 8
Valencia Orange Cultural and Overhead Costs Per Acre
Ventura County 1992

Item	Typical Cost \$ per Acre
Cultural Operation Costs (Labor + Material + Equipment)	
Fertilization: Nitrogen	100.00
Minor Elements	50.00
Leaf Analysis	5.00
Irrigation: Labor	135.00
Water @ 2.0 Acre-feet/acre	375.00
Insect and Mite Control	140.00
Snail Control (baiting)	77.00
Disease: Copper Spray for Brown Rot	60.00
Weed Control	70.00
Frost Protection	100.00
Tree Replacement	25.00
Erosion Control	15.00
Topping (Every 4th Year)	85.00
Hedging Box Rows	12.00
Miscellaneous	45.00
Total Cultural Costs	1,294.00
Overhead	535.00
Total Costs	1,829.00
Source: Cooperative Extension, Ventura County, University of California, Ventura County Agricultural Data	

According to the University of California Cooperative Extension, sample total cultural costs for avocados for the Southern Coast Region for 1992 were \$1,139 per acre in the fifth year of the life of the orchard. Harvest costs were \$377, interest on operating capital at 9% was \$112, and overhead was \$757 for a total per acre cost of \$2,385.

Leading Commodities and Productions Totals

Lemons have been the number one crop in terms of value of production since 1947. The production value of lemons is almost twice the value of second place celery. In recent years, the production value of celery and avocados have gained position with celery overtaking strawberries in 1993. The primary shifts in the top ten commodities in the past ten years are Valencia Oranges going from fourth to sixth, and cabbage moving from fourteenth to tenth.

Table 9
Ventura County's Rankings of Commodities

<u>Commodity</u>	<u>1983 Ranking</u>	<u>1988 Ranking</u>	<u>1993 Ranking</u>
Lemons	1	1	1
Celery	2	3	2
Strawberries	3	2	3
Nursery Stock	5	4	4
Avocados	6	6	5
Valencia Oranges	4	5	6
Lettuce	7	7	7
Cut Flowers	8	8	8
Broccoli	10	12	9
Cabbage	14	9	10

Source: Ventura County Agricultural Commissioner's Report

Citrus makes up 38% of harvested acres and 44% of production value. Tree crops make up 54% of harvested acres and 51% of production value.

Table 10
Fruit and Vegetable Production and Values, 1993

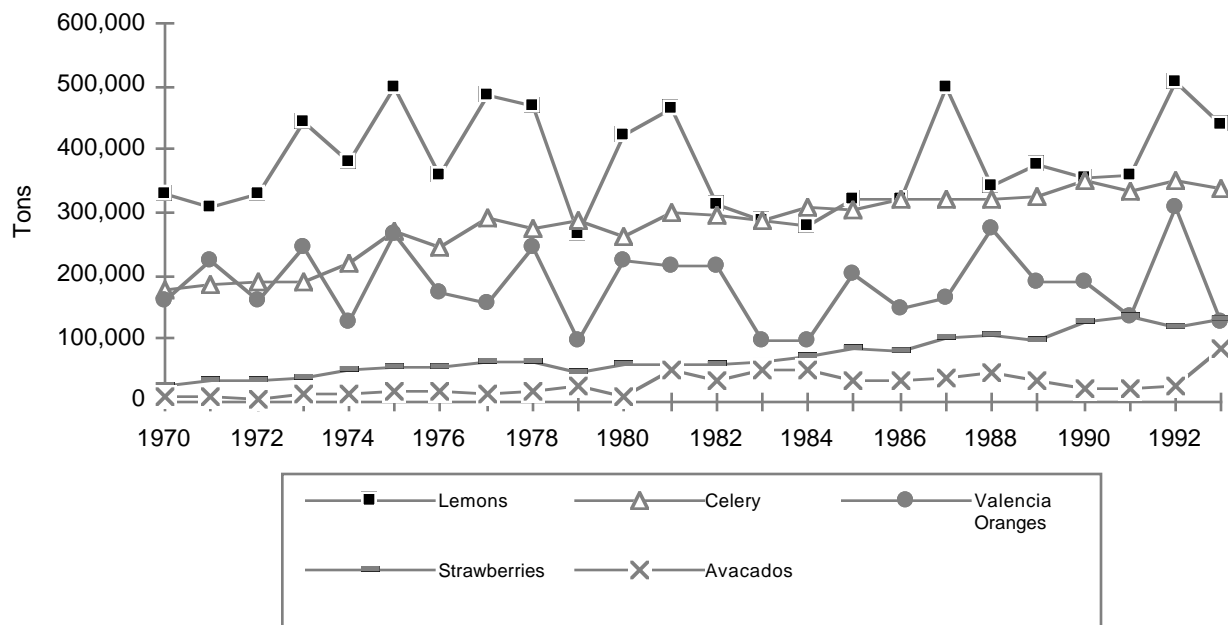
Crop	Production			\$ Value		
	Harvested Acreage	Tons Per Acre	Total Tons	Per Ton	Per Acre	Total (1,000's)
Vegetables						
Celery	9,878	34.33	339,130	\$335.63	\$11,523	\$113,823
Lettuce	6,824	10.04	68,502	419.02	4,206	28,704
Onions	2,256	20.58	46,431	288.17	5,931	13,380
Broccoli	4,632	5.2	24,081	532.7	2,769	12,825
Cabbage	2,202	22.53	49,611	180.91	4,076	8,975
Peppers	1,852	13.13	24,322	305.98	4,018	7,442
Cilantro	1,658	7.21	11,958	555.44	4,006	6,642
Spinach	1,644	6.52	10,713	597.87	3,896	6,405
Oriental Vegetables	913	11.29	10,308	616.71	6,963	6,357
Parsley	859	10.07	8,648	649.28	6,537	5,615
Tomatoes	2,402	32.05	76,979	65.84	2,110	5,068
Cauliflower	1,318	6.57	8,656	534.77	3,512	4,629
Beans	2,382	2.4	5,724	542.98	1,305	3,108
Kale	300	24.05	7,216	426	10,247	3,074
Sweet Corn	1,127	6.78	7,645	329.63	2,236	2,520
Carrots	887	17.58	15,597	149.64	2,631	2,334
Cucumbers	412	9.33	3,844	454.99	4,245	1,749
Pumpkin	252	12.88	3,247	158.92	2,048	516
Total Vegetables	41,798		722,612		5,578	233,166
Fruits						
Lemons	24,239	18.21	441,379	489.67	8,917	216,129
Strawberries	4,795	27.27	130,763	844.63	23,034	110,447
Avocados	16,199	5.1	82,600	604.19	3,081	49,906
Navel Oranges	806	7.79	6,275	260.4	2,029	1,634
Valencia Oranges	12,325	10.16	125,196	359.71	3,654	45,034
Grapefruit	667	18.13	12,093	235.43	4,268	2,847
Total Fruits	59,031		798,306		7,952	469,397
Combined Total*	100,829		1,520,918		6,968	702,563

*Fruits and vegetables make up approximately 96% of Ventura County agricultural production by production value.
Source: Ventura County Agricultural Commissioner's Report, 1993

Agricultural Production in Tons

Lemons are also the leading crop in Ventura County in terms of weight. Celery is the second leading crop and has surpassed lemons as the leading crop a few times in the last twenty years.

Figure 8
Ventura County Agricultural Production



Source: Ventura County Agricultural Commissioner's Reports.

II. Farmland Characteristics

Land in Farms

Table 11 Farm Acreage, Number and Size California and Ventura County						
Year	California			Ventura		
	Number of Farms	Land in Farms (1,000 acres)	Average Size (acres)	Number of Farms	Land in Farms (1,000 acres)	Average Size (acres)
1964	80,852	37,011	458	1,507	437	290
1969	77,875	35,328	454	1,679	433	258
1974	67,674	33,386	493	1,639	310	189
1978	73,194	32,727	447	1,793	340	190
1982	82,463	32,157	390	2,064	301	146
1987	83,217	30,598	368	2,120	329	155
1992	77,699	28,979	373	2,195	321	146

Source: U.S. Bureau of the Census, *Census of Agriculture: California*

Average Farm Size

Ventura County's average farm size has declined from 290 acres in 1964 to 146 in 1992. This is considerably below the average California farm size of 373 acres.

Number of Farms

The number of farms in Ventura County has been slowly, but steadily increasing over the past thirty years. This is in contrast to the State of California in which the number of farms has been relatively constant. The definition of a farm used in Census of Agriculture changed in 1974. A farm is defined as an agricultural operation with production of \$1,000 or more. The definition used before 1974 did not have a minimum requirement for dollars of production.

Value of Assets

Table 12
Value of Land and Buildings
California and Ventura County

Year	California			Ventura		
	Total Value	Average Value/Farm	Average Value/Acre	Total Value	Average Value/Farm	Average Value/Acre
	Millions	dollars	dollars	Millions	dollars	dollars
1964	\$17,355	\$214,650	\$468	\$918	\$609,125	\$2,118
1969	16,932	217,429	479	815	485,593	1,885
1974	21,793	322,034	653	663	404,683	2,141
1978	38,152	521,240	1,161	1,130	630,148	3,357
1982	61,565	746,577	1,918	1,647	797,809	4,659
1987	48,571	583,668	1,575	1,553	732,708	3,996
1992	63,718	820,063	2,199	2,147	978,005	6,696

Source: U.S. Bureau of the Census, *Census of Agriculture: California*

Value of Land and Buildings

Investment dollars in Ventura County agricultural land and buildings are high. On an average Ventura County farm, land and buildings are worth \$978,005, twenty percent higher than the California state average. More dramatically, the average Ventura County farm has a value of \$6,700 per acre, compared with \$2,200 per acre statewide.

Water Resources

Ground water is the main water supply for irrigation and urban uses over much of the coastal plain of Ventura County. Most of the water used by farmers in Ventura County is pumped from wells on their farms. As a result of increasing water demand, the ground water aquifers underlying the plain have been overdrafted.⁸ Specifically, water has been taken from the Oxnard Aquifer faster than it has been replenished, and salt water from the ocean has been moving into it.

⁸California Water Plan Update, 1993, Vol. II, p. 123.

To eliminate the overdraft in all aquifer zones, the Fox Canyon Ground Water Management Agency adopted ordinances requiring meter installation on all wells pumping more than fifty acre-feet per year. The objective of the ordinances is to limit the amount of ground water that can be pumped and to restrict drilling of new wells in the north Las Posas Basin.

In February 1991, the United Water Conservation District completed a Diversion Project on the Santa Clara River which increases diversion by about 43%. The diverted water is used for ground water recharge and agricultural irrigation, thereby reducing agricultural ground water demand.⁹

According to the *California Water Plan Update*, 1993, the South Coast Region has one of the most expensive rates in the state for agricultural retail water cost with a rate of \$137 per acre-foot.¹⁰ (Ventura County is the largest agricultural producer in the region.) The agricultural ground water production costs for the South Coast Hydraulic Region is also high with a range of \$80 to \$120 per acre-foot.¹¹

These high water costs give Ventura County growers an economic incentive to find ways to conserve water. Growers in Ventura County contribute to the reduction of agricultural water demand through conservation efforts which employ the latest irrigation system technologies of drip emitters and low-flow sprinklers.¹²

⁹*California Water Plan Update*, 1993, Vol. II, p. 123.

¹⁰*California Water Plan Update*, 1993, Table 7-9.

¹¹*California Water Plan Update*, 1993, Table 7-10.

¹²*California Water Plan Update*, 1993, Vol. I, p. 189.

III. People on Farms

Farm Ownership and Tenure

Table 13 Farm Ownership and Organization						
Ventura County	1982		1987		1992	
	# of Farms	% of Farms	# of Farms	% of Farms	# of Farms	% of Farms
<u>Farm Operator</u>						
Full Owner	1,652	80.04	1,735	81.84	1,834	83.55
Part Owner	159	7.70	155	7.31	127	5.79
Tenant	253	12.26	230	10.85	234	10.66
<u>Type of Ownership</u>						
Individual or Family	1,356	65.70	1,428	67.36	1,530	69.70
Partnership	475	23.01	433	20.42	388	17.68
Family Held Corp.	149	7.22	171	8.07	173	7.88
Other Corporation	38	1.84	31	1.46	33	1.50
Other*	46	2.23	57	2.69	71	2.23
California	1982		1987		1992	
	# of Farms	% of Farms	# of Farms	% of Farms	# of Farms	% of Farms
<u>Farm Operator</u>						
Full Owner	60,556	73.4	60,639	72.9	56,559	75.44
Part Owner	12,692	15.4	12,218	14.7	11,471	15.30
Tenant	9,215	11.2	10,360	12.4	6,939	9.26
<u>Type of Ownership</u>						
Individual or Family	65,482	79.4	64,928	78.0	60,187	77.49
Partnership	11,360	13.8	12,127	14.6	11,350	14.61
Family Held Corp.	4,849	5.9	4,677	5.6	4,220	5.43
Other Corporation	343	0.4	690	0.8	847	1.09
Other*	429	0.5	795	1.0	1,065	1.37
*Cooperative, Estate, Trust, Institution, etc.						
Source: U.S. Bureau of the Census, <i>Census of Agriculture: California</i> , 1992, 1987, 1982						

Families or individuals own just over two-thirds of Ventura County farms. This percentage is increasing in contrast to the state percentage which is declining. If one includes family held corporations in this category, the percentage increases to three-fourths. Partnerships make up 17.68 percent of ownership, which is higher than both the state and national averages of just under fifteen percent and ten percent,

respectively. Most farms (90%) are managed directly by an owner or part owner who is a farmer and the percentage of tenant farmers is declining.

Farmers tend to stay on a farm for ten years or more. In Ventura County, more than half of the farmers reported to have spent ten or more years on their present farm. This is consistent with the State of California.

Table 14 Farm Operator Characteristics Principal Occupations & Farm Tenure				
	Ventura County		California	
	# of Farms	% of Farms	# of Farms	% of Farms
<u>Principal Occupation</u>				
Farming	947	43.14	40,215	51.78
Other	1,248	56.86	37,454	48.22
<u>Years on Present Farm</u>				
Less than 2	105	4.78	4,239	5.46
3 to 4	202	9.20	7,526	9.69
5 to 9	489	22.28	13,886	17.88
Greater than 10	1,185	53.99	42,172	54.30
Not Reported	214	9.75	9,846	12.68
Source: U.S. Bureau of the Census, <i>Census of Agriculture: California, 1992</i>				

Age, Gender and Race

The age, gender and race classifications of farmers in Ventura County generally reflect the breakdown at the state level. The average age of farmers in Ventura County is 56.4 years; while at the state level, it is 55.2 years. Ventura County has a slightly lower percentage of farmers who are under 35 years with 3.5% compared to 6.1% at the state level.

Table 15
Farm Operator Characteristics
Age, Gender and Race

	Ventura County		California	
	<u># of Farms</u>	<u>% of Farms</u>	<u># of Farms</u>	<u>% of Farms</u>
<u>Ownership</u>				
<u>Age</u>				
under 25	1	0.05	417	0.54
25 to 34	75	3.42	4,288	5.53
35 to 44	354	16.13	14,232	18.35
45 to 54	608	27.70	19,223	24.78
55 to 64	534	24.33	17,997	23.20
65 & over	623	28.38	21,412	27.60
<u>Gender</u>				
Male	1,918	87.38	68,016	87.57
Female	277	12.62	9,653	12.43
<u>Race & Ethnicity*</u>				
White	2,058	93.76	71,772	92.53
Black	7	0.32	253	0.33
Native American	3	0.14	486	0.63
Asian or Pacific Islander	47	2.14	3,292	4.24
Other Races	80	3.64	1,766	2.28
Spanish Origin	151	6.88	3,883	5.01

*Numbers add up to greater than 100% because those claiming Spanish Origin also claim another racial classification.

Source: U.S. Bureau of the Census, *Census of Agriculture: California*, 1992

The racial and ethnic breakdown of Ventura County farmers is very close to that of the state. This is in spite of Ventura County's higher percentage of white residents in the general population of 65.9% compared with the state percentage of 57.2%

Net Income

Total net returns for Ventura County farms was \$115,741,000 in 1992, averaging \$52,729 per farming operation. Net returns are defined as market value of products sold less total production expense and are calculated on a cash flow basis. Net returns do not include farm income from other sources. Production expense does not include returns to capital or the value of the owner's labor. Average returns are defined as the net returns divided by the number of farms.

Table 16 Farm Income (In \$1,000's unless stated otherwise)				
	Ventura County		California	
	1987	1992	1987	1992
Market Value of Products Sold	\$537,519	\$667,826	\$13,922,234	\$17,651,912
Production Expense				
Livestock & Poultry Purchased	3,032	7,263	776,540	935,152
Feed	29,288	20,521	1,707,608	2,108,719
Seeds, Bulbs, Plants & Trees	12,534	19,377	215,542	274,495
Commercial Fertilizer	13,974	23,088	427,924	568,772
Ag. Chemicals	18,413	23,542	544,779	694,549
Petroleum Products	9,554	13,425	332,166	414,984
Electricity	11,089	12,955	330,538	500,264
Hired Farm Labor	135,552	186,746	2,385,242	2,922,390
Contract Labor	40,614	62,847	613,340	967,377
Repair & Maintenance	15,972	21,391	503,218	630,574
Customwork, Rental of	12,348	8,547	335,292	448,923
Machinery & Equipment				
Interest Paid	17,542	18,830	697,449	738,910
Cash Rent	16,142	20,349	381,871	492,662
Property Taxes Paid	6,961	11,480	245,512	291,385
Other Production Expenses	58,521	99,057	1,420,571	1,815,826
Total Production Expense	401,539	549,419	10,917,593	13,804,983
Net Returns	135,980	115,741	2,927,279	3,179,111
<u>Average Per Farm (\$)</u>				
Market Value of Products Sold	253,547	304,249	167,300	219,546
Production Expense	189,405	250,305	131,205	177,755
Net Returns (dollars)	64,016	52,729	35,179	40,935
Source: U.S. Bureau of the Census, <i>Census of Agriculture: California</i>				

The figures for California are net returns of over three billion dollars, averaging \$40,935 per farming operation. The Ventura County net return per farm is about three times the U.S. average. Thirty-four percent of farm production expense in Ventura County were payments to farm labor.

Table 17 Value Per Irrigated Acre				
	Ventura County		California	
	1987	1992	1987	1992
Market Value of Products Sold (\$1,000)	\$537,519	\$667,826	\$13,922,234	\$17,051,912
Net Returns (\$1,000)	135,980	115,741	2,927,279	3,179,111
Market Value of Products Sold per Irrigated Acre (\$)	5,172	6,593	1,833	2,252
Net Return per Irrigated Acre (\$)	1,308	1,143	385	420
	Fresno County		Monterey County	
	1987	1992	1987	1992
Market Value of Products Sold (\$1,000)	\$1,681,523	\$2,081,516	\$730,746	\$1,202,715
Net Returns (\$1,000)	\$360,608	\$378,827	\$157,703	\$272,991
Market Value of Products Sold per Irrigated Acre (\$)	1,663	2,084	4,034	5,402
Net Return per Irrigated Acre (\$)	357	379	871	1,226
Source: U.S. Bureau of the Census, <i>Census of Agriculture: California</i>				

The soil and climate of Ventura County are a natural resource that should be highly valued. The market value of products sold per irrigated acre of land in Ventura County of \$6,593 is about 2.93 times as large the average for California. The net return per irrigated acre of land is 2.72 times as large as the state average. The comparison is made to Fresno County because is California's biggest agricultural producing county. The Monterey County comparison is relevant because the two counties grow similar crops.

The Oxnard Brothers' Sugar Beet Factory

Robert, Benjamin, Henry T., and James Oxnard were four French immigrant brothers who inherited a sugar refining business. In 1887, the brothers consolidated their business with other sugar refining companies and took the name of the American Sugar Refining Company. In 1889 and 1890, they built the first two of their five factories in Grand Island, Nebraska and Chino, California, respectively.

After Ventura County farmer Albert F. Maulhardt heard about the sugar beet factory in Chino, he went to San Francisco to persuade Henry T. Oxnard to come to Ventura County and consider it as a future sugar beet refinery site. At the time, only crops such as barley and lima beans were grown in the area because of the unpredictable rainfall. The market for lima beans was depressed from excess supply. Maulhardt reasoned that since sugar beets can grow in almost any soil or climate, they would be a good crop to rotate with lima beans. If a refinery could be built in the area, the farmers would have a stable market for their sugar beets. Another argument for growing sugar beets was that the main competition would be imports (which would include transportation costs.) During the period 1880 to 1896, ninety percent of the sugar consumed in the U.S. was imported.¹³

In 1896, Maulhardt convinced the growers to raise enough sugar beets to send a crop to Chino. At the Chino refinery they determined that the sugar beets were eighteen to twenty percent sugar--at a time when beets with twelve percent sugar were considered good.¹⁴ These results convinced Henry T. Oxnard. The Oxnard brothers' proposal was that they would build a \$200 million sugar refinery on a site in the bean fields close to the growers if the County of Ventura gave them 100 acres for the site, the right of way for a spur from the Southern Pacific Railroad, and a railroad and draining ditch to the ocean. The growers also had to pledge to plant 20,000 acres of sugar beets for five years. The Oxnard brothers guaranteed a price of \$3.25 per ton for beets with 12% sugar, plus 25 cents per ton for each

continued next page

¹³LeDesma, p. 3.

¹⁴LeDesma, p. 4.

The Oxnard Brothers' Sugar Beet Factory, *continued*

percentage of sugar above that. The factory would be the largest in the west, processing at least 2,000 tons of sugar beets per day. When the refinery was completed in 1898, Major Driffill, the first manager of the refinery, arranged for acquisition of land and developed plans for a town site near the factory. "Stories say that Henry T. Oxnard wanted the town to be named Sakchar (which in Greek means sugar), but when he called from Sacramento, the phone connection was so poor that they could not understand what he was saying. In exasperation, he said to just call the town 'Oxnard'."¹⁵ The factory was responsible for an enormous amount of growth in the area, and on June 30, 1903, Oxnard officially became a town.

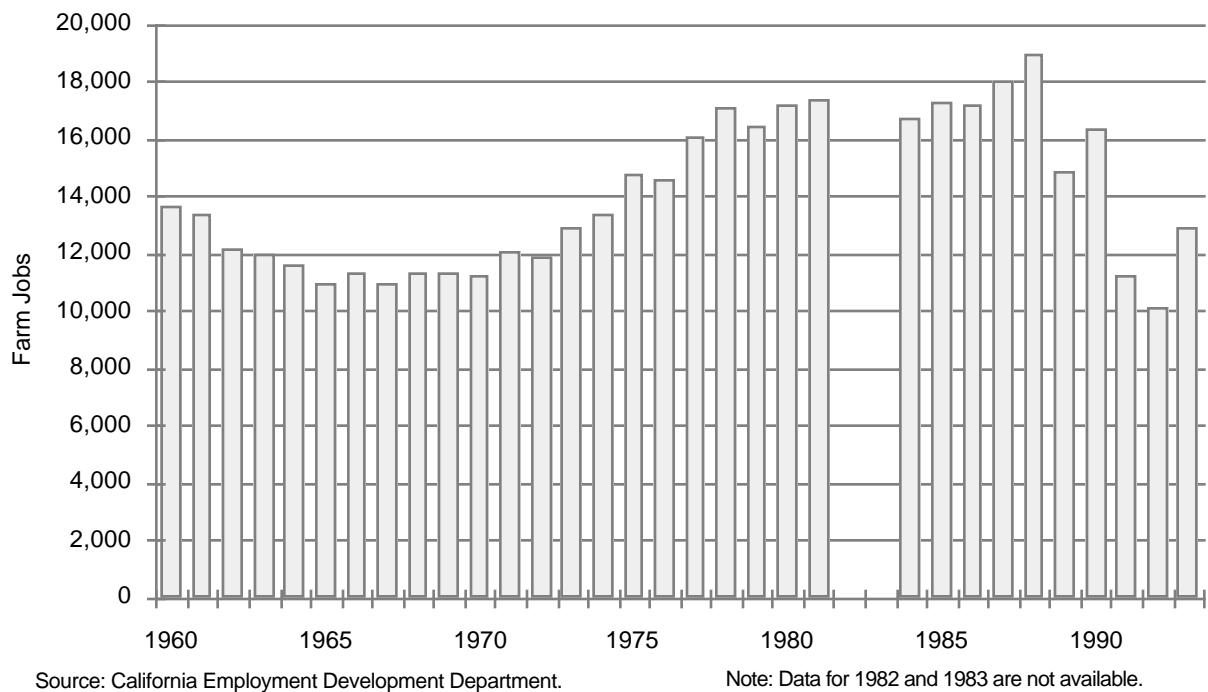
From the opening of the refinery up to World War I, the main crops grown in the Oxnard area were grain, lima beans, and sugar beets. After World War I, sugar beets became less profitable. Irrigation made it possible for farmers to raise citrus crops. The factory was open from 1899 to 1959. The factory was salvaged by Lipsett Steel products, and the site went to Ventura County Industrial Plaza for development.

¹⁵LeDesma, p. 6.

Chapter 2

I. Who Works in Agriculture

Figure 9
Ventura County Farm Employment



Farm employment peaked in 1988 and there has been a downward trend since then, which is consistent with the decline in available cropland. While direct employment from agriculture is in decline, jobs indirectly related to agriculture continue to be a strong source of employment in Ventura County.

Table 18
Farm Employment in Ventura County

<u>Year</u>	<u>Total</u>	Farmers & Unpaid <u>Family</u>	Hired <u>Total</u>	Domestic <u>Regular</u>	<u>Seasonal</u>	Contract <u>Foreign</u>
1960	13,620	1,980	7,350	INA*	INA	4,290
1961	13,330	1,960	7,530	INA	INA	3,840
1962	12,120	2,110	6,650	INA	INA	3,360
1963	12,020	2,080	6,760	INA	INA	3,180
1964	11,570	2,000	6,570	3,570	3,000	3,000
1965	10,990	1,920	9,000	3,660	5,340	70
1966	11,340	1,920	9,420	3,820	5,600	0
1967	10,950	1,930	9,020	3,840	5,180	0
1968	11,300	1,210	10,090	4,180	5,910	0
1969	11,330	1,270	10,060	4,510	5,550	0
1970	11,260	1,510	9,750	4,940	4,810	0
1971	12,100	1,530	10,570	5,050	5,520	0
1972	11,870	1,530	10,340	4,830	5,510	0
1973	12,920	1,620	11,300	5,170	6,130	0
1974	13,390	1,620	11,770	5,170	6,600	0
1975	14,740	1,610	13,130	6,410	6,720	0
1976	14,630	1,630	13,000	6,250	6,750	0
1977	16,030	1,600	14,430	6,690	7,740	0
1978	17,130	1,610	15,520	6,630	8,890	0
1979	16,400	1,560	14,840	6,570	8,270	0
1980	17,190	1,560	15,630	6,950	8,680	0
1981	17,340	1,570	15,770	6,950	8,820	0
1982	INA	INA	INA	INA	INA	INA
1983	INA	INA	INA	INA	INA	INA
1984	16,720	1,550	15,170	6,940	8,230	0
1985	17,310	1,610	15,700	7,050	8,650	0
1986	17,190	1,780	15,410	6,790	8,620	0
1987	18,030	1,850	16,180	7,200	8,980	0
1988	18,920	2,160	16,760	7,200	9,560	0
1989	14,890	1,780	13,110	6,170	6,940	0
1990	16,310	1,750	14,560	6,590	7,970	0
1991	11,200	1,080	10,120	3,790	6,330	0
1992	10,090	870	9,220	2,890	6,330	0
1993	12,890	1,220	11,670	5,010	6,660	0

Source: California EDD

* Information Not Available

Farm Labor Contractors

Farm labor contractors are becoming more and more important in agricultural production. In 1992, researchers from the U.C. Berkeley, U.C. Davis, and Vaupel Associates completed a study on farm labor contractors in California for the California Employment Development Department.¹⁶ Although farm labor contractors' field workers tend to be seasonal workers, the E.D.D. study found that in Ventura County citrus and vegetable workers tend to be settled in the community and find work there through much of the year. The E.D.D. study indicated that in Ventura County, the contractors' field workers are mostly male (93%), and Hispanic (90%). About three-fourths of the labor contractors were born in Mexico, one-fourth was born in the United States. The average age is fifty years. Half of the workers speak English well, and about a fifth speak English poorly or not at all. Just over a third speak English at home. About a fifth have graduated from a U.S. high school. The average field worker has about ten years of experience.

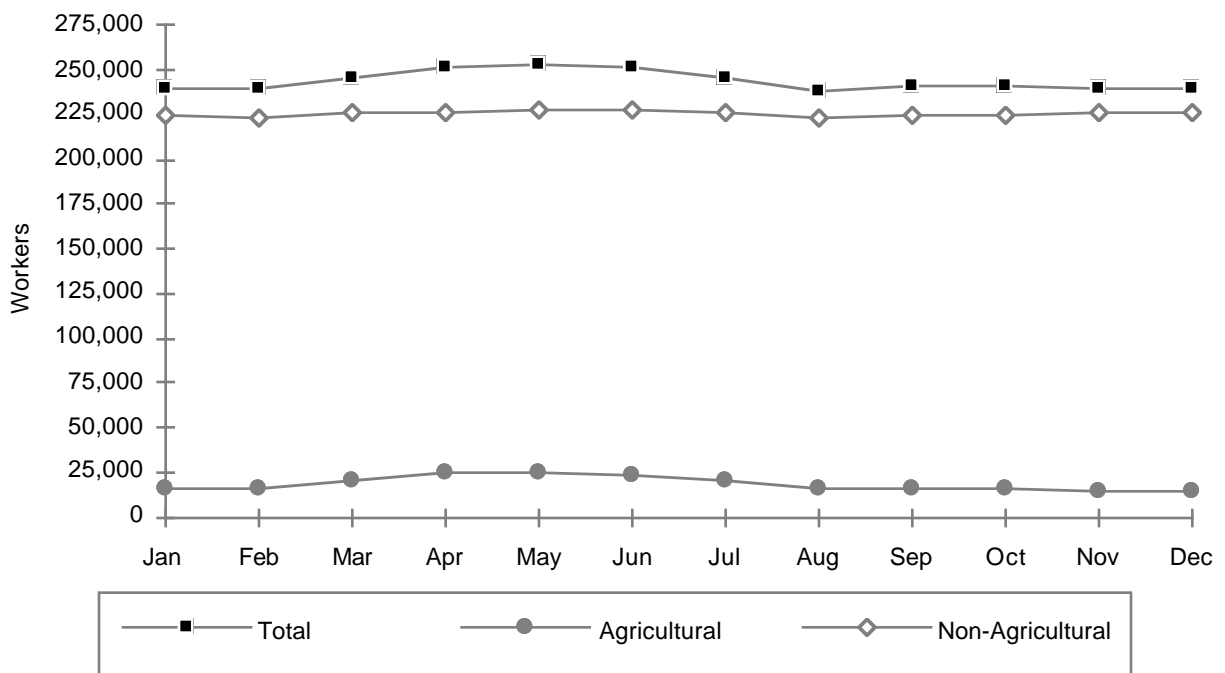
Most farm labor contractors take a commission on the wage that the customers (farm operators) agree to pay per field worker. Ten percent use a piece rate system. The mean payroll of the farm labor contractors sampled in Ventura County was just over \$1 million. During the peak employment period, the mean number of workers employed per farm labor contractor was 175. Many farm labor contractors operate other businesses. Of the farm labor contractors sampled in Ventura County, 55% of farm labor contractors operated some other business. Most of the farm labor contractors (90%) have been in business for more than three years.

¹⁶California Employment Development Department, Labor Market Information Division, *Farm Labor Contractors in California*, California Agricultural Studies 92-2.

Seasonality of Employment

Agricultural employment increases in the spring and continues to be high throughout the summer, peaking in May. Most of the seasonality of county employment can be attributed to agriculture.

Figure 10
Seasonality of Employment in Ventura County, 1992

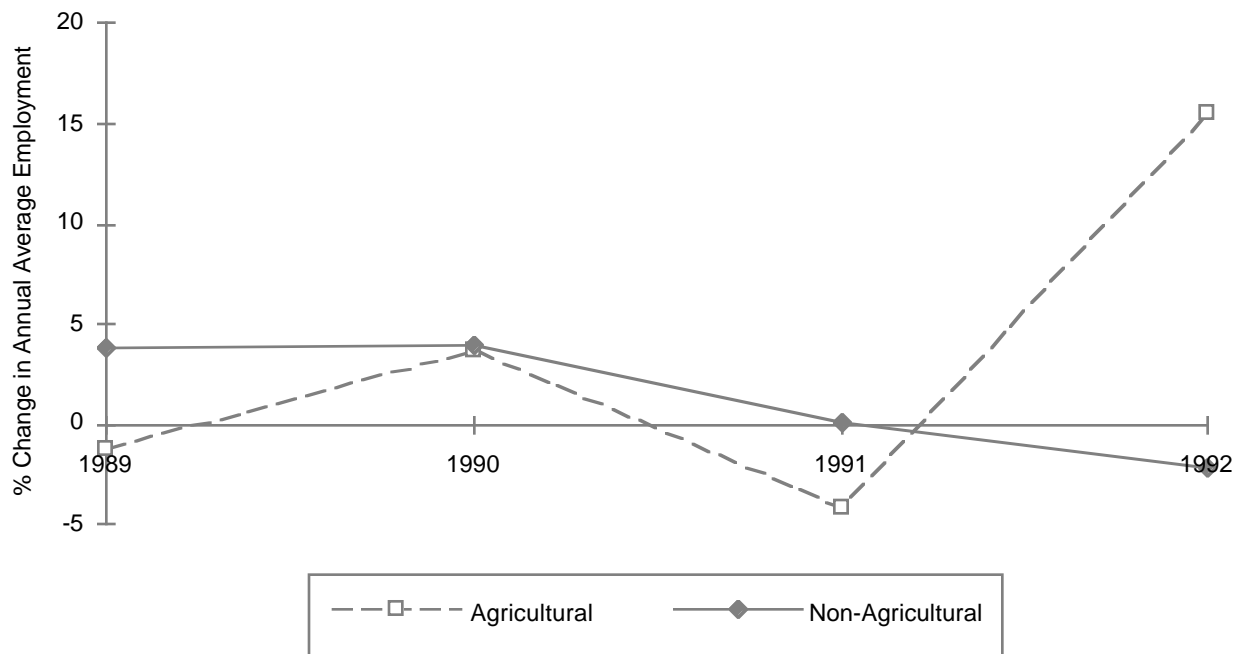


Source: California Employment Development Department.

II. Countercyclical Employment in Agriculture

Agricultural employment tends to be countercyclical. This means that when the rest of the economy is weak agricultural employment remains strong. Figure 13 shows the percentage change in agriculture and non-agriculture annual average employment from one year to the next.

Figure 11
Countercyclical Employment in Agriculture
Ventura County



Source: California Employment Development Department, Annual Planning Information.

III. Affordable Housing for Farm Labor

In Ventura County, with its high property values, it is difficult to find affordable housing. In 1992, the median existing single-family home sales price of \$225,680 was 14% higher than the statewide median price of \$197,900. When compared to the heavily agricultural Central Valley; Ventura County's median price was 89% higher than the median sales price of \$119,130 in the Central Valley. Ventura County's median sales price peaked in 1990 and has been on a downward trend for the past two years.¹⁷

High property values also implies high payments for rental housing. According to 1990 Census results, California is the second most expensive state (Hawaii was first) to rent housing accommodations in with the median contract rent equal to about two-and-a-half times the national average. According to the *1990 Census of Housing*, the median gross rent for Oxnard and Ventura was \$899 per month.

¹⁷California Statistical Abstract, 1993

Limoneira: Place of the Lemon

"One hundred years ago, [Maine natives] Wallace Hardison [founder of Union Oil] and Nathan Blanchard inaugurated the agricultural venture they called Limoneira [which means place of the lemon in Portuguese] based upon a forthright business plan: 'the culture, curing and marketing of the lemon.' This unpretentious conception guided the company and those that came afterward--transforming rocky, dusty acreage and ink on paper into vigorous enterprise."¹⁸ In 1872, Blanchard arrived in Ventura County, purchased 2,700 acres of land, and established the Santa Paula townsite. Blanchard planted 100 acres of oranges in 1874. The Southern Pacific Railroad arrived in Santa Paula in 1887 and made it possible to ship oranges east.

In 1891, Blanchard and Hardison purchased land to raise lemons. "Blanchard and Hardison also obtained water rights for the property by organizing the Santa Paula Water Company in 1891 and the Thermal Belt Water Company in 1893."¹⁹ In an unstable economic atmosphere, Blanchard and Hardison formed the Limoneira Company in Santa Paula on March 4, 1893 and sold stock. A nursery was established at the ranch to provide a source of future orchard stock."²⁰ They also built bunk houses, dormitories, and a mess hall for the workers.

In 1899, Limoneira joined the Southern California Fruit Exchange (which later became Sunkist), quit in 1904, and re-joined in 1911. In 1916, Limoneira decided to add the Sunkist label to their boxes and wraps.

In 1907, Limoneira purchased the 2,300 acre Oliveland Tract for \$400,000. The company had grown from fifteen employees in 1897 to 200-250 in 1907. Limoneira provided affordable, close-to-the-work-site housing for its employees with cottages and apartments for fieldworker families, and houses for supervisors' families. The company also ran an on-site store for its employees. "By 1923 the main part of the ranch took on the appearance of a small town."²¹ By 1920, Limoneira's "...labor force during the same year exceeded 400 employees during peak season, with at least half that number staying on year round.

Continued on next page

¹⁸Triem, p. 23.

¹⁹Triem, p. 2.

²⁰Triem, p. 3.

²¹Triem, p. 10.

Limoneira: Place of the Lemon, Continued

According to the...Santa Paula Chronicle for October 1921, Limoneira had become '...the largest individual shipper of lemons'."²²

Even during the Great Depression profits soared.

The 1940's were a more difficult time for Limoneira. World War II made it difficult to get supplies, and modernization and replacement of equipment was delayed. There was also a labor shortage of field workers. Limoneira began to hire Mexican nationals under the bracero guest worker program in 1942. Over-production depressed markets.

The 1950's brought about many changes including the company responding to changing market demand by producing more Valencia Oranges, the installation of labor-saving equipment, and the replacement of wooden crates with fiberboard cartons. In the 1960's, labor unrest confronted the Limoneira Company. The bracero program ended in 1964 causing Limoneira to demand more domestic labor. In an effort to attract more domestic workers, Limoneira made improvements and additions to employee living and recreational facilities. Soon Mexican laborers were allowed to emigrate to the U.S. on work permits, and Limoneira took advantage of this additional labor supply. The company began to offer benefits and educational opportunities including language classes and a head start program for pre-school children of field workers.

Limoneira's field workers decided to join the United Farm Workers in 1978. "The unionization experiment lasted until 1985 when the workers voted to decertify it, but legal problems and appeals required a second vote in 1991. The field workers once again voted against the union."²³

Limoneira is still changing. In the early 1980's, the company entered the computer age. In 1985, the Limoneira Company merged with the Samuel Edwards Associates to form Limoneira Associates. This merger almost doubled Limoneira's acreage. Milton Teague died in 1986, and his nephew Alan Teague became Chairman of the Board in 1987. As of 1992, Limoneira had 3,188 producing acres including 1,303 acres of lemons.²⁴

²²Triem, p. 9.

²³Triem, p. 21.

²⁴Triem, p. 23.

Chapter 3

Aggregate Measures of the Food and Fiber Sector

Ventura County's agriculture and agricultural processing sectors have a large impact on the economy in Ventura County. The following multiplier effects (the total impact on the economy from a particular sector) are from the IMPLAN²⁵ system.

Agricultural production and processing sales in 1992 were \$1.16 billion. The total impact of these sales on the county economy was \$2.41 billion. This represents an additional \$1.25 billion in sales from ripple effects from agriculture and related industries

Similarly, the same \$1.16 billion in sales created \$1.22 billion in personal income, \$1.31 billion in value added, and 28,641 jobs. This represents 8.09% of personal income, 7.22% of value added, and 8.13% of jobs in Ventura County. Value added is defined as the additional worth contributed to a product by each step of production. The vast majority of these impacts are from vegetable, fruit, and nut production and vegetable and fruit processing. This impact is comparable to that of the State of California as a whole. Carter and Goldman found that the statewide impact of agricultural was 9.42% on personal income, 9.05% on value added and 9.78% on jobs.

²⁵The IMPLAN (Impact analysis for PLANning) system was designed by the U.S. Forest Service/U.S. Department of Agriculture to be able to estimate economic input-output models for any county, or group of counties in the United States. An input-output model provides detailed economic multipliers for all sectors of the economy.

Table 19
Economic Impacts of Ventura County's Food Industry

Major Commodity Groups	Agricultural Production/Processing Sales, 1992	Impacts on Ventura County			
		Sales	Personal Income	Value Added	Jobs
	Dollars	\$1,000	\$1,000	\$1,000	No.
Dairy Farm/Poultry Products	5,001,718	9,450	5.368	5,653	116
Livestock	5,442,768	9,550	5.647	6,119	116
Food/Feed Grains	14,968,766	25,398	13.680	14,981	213
Fruits and Tree Nuts	248,002,064	640,862	317.343	344,748	8,957
Vegetables	187,935,509	429,019	219.809	235,408	4,966
Misc. Crops	1,140,624	2,354	1.374	1,463	31
Greenhouse/Nursery Products	82,911,447	238,553	164.214	175,532	5,252
Sausages/Prepared Meats	11,941,862	18,886	6.949	7,494	154
Fluid Milk	42,812,279	63,718	20.340	21,753	402
Processed Fruits/Veg.	431,671,999	781,542	383.843	409,052	7,008
Flour Grain Mill Products	29,039,856	45,627	21.963	23,244	379
Cocoa/Chocolate Products	11,777,356	17,986	7.729	8,168	139
Shortening/Cooking Oils	4,143,247	6,386	1.813	1,934	32
Wines, Brandy and Spirits	1,723,497	3,228	1.104	1,697	30
Bottled/Canned Soft Drinks	79,827,337	120,571	49.716	53,157	840
Manufactured Ice	73,193	228	124	140	5
Total	\$1,158,413,521	\$2,413,358	\$1,221,019	\$1,310,541	28,641
% of Ventura County			8.09%	7.22%	8.13%

Ventura County Estimated Personal Income, 1992 (\$1,000)

\$15,088,406

Ventura County Value Added, 1992 (\$1,000)

\$18,146,531

Ventura County Employment, 1992²⁶

\$352,200

Sources for Data:

1. Ventura County Personal Income, 1992: California Department of Finance, Sacramento
2. Ventura County Value Added, 1992: Estimated applying ratio of California State Product to Personal Income in 1989 to Ventura County Personal Income in 1992.
3. Ventura County Employment, 1992: California Employment Development Department, Sacramento

²⁶Includes salaried workers, employers, own-account workers, unpaid family workers, and workers directly involved in work stoppages.

Bibliography

Blanchard, Dean Hobbs, Edited by Grant Heil, *Of California's First Citrus Empire: A Rainbow Arches from Maine to Ventura County*, The Castle Press, Pasadena, 1983.

California Crop and Livestock Reporting Service, California Vegetable Crops, (selected years.)

California Crop and Livestock Reporting Service, Fruit and Nut Statistics, (selected years.)

California Employment Development Department, Annual Planning Information, Ventura County.

California Employment Development Department, Labor Market Information Division, *Farm Labor Contractors in California*, California Agricultural Studies 92-2.

California Employment Development Department, Ventura County Employment Data.

California Department of Water Resources, *California Water Plan Update, 1993*, Draft Bulletin 160-93, November 1993.

Cooperative Extension, Ventura County, University of California, Ventura County Agricultural Data.

Carter, Harold O. and George Goldman, *The Measure of California Agriculture: Its Impact of the State Economy*, Agricultural Issues Center, November 1992.

LeDesma, Diane, "The Oxnard Brothers and the Beet Sugar Factory", Ventura County Historical Museum, 1981.

Triem, Judith, *The Limoneira Company, One Hundred Years of Growing: 1893 -1993*, Limoneira Company, Santa Paula, California, 1993

UCSB Economic Forecast Project, Economic Base Study Oxnard-Port Hueneme Area, 1994.

U.S. Department of Agriculture, Agricultural Statistics, (selected years).

U.S. Department of Agriculture, *Vegetable and Situation Outlook*, (selected years).

U.S. Department of Commerce, Bureau of the Census, *Census of Agriculture*, (selected years.)

U.S. Department of Commerce, Bureau of the Census, *County Business Patterns*, (selected years.)

U.S. Forest Service, IMPLAN computer program, version 91-09.

Ventura County Agricultural Commissioners Reports, 1930-1993.