



Ventura County's Crop Production during the Last Three Decades

Research Team: Kristen Mathre, Grant Volk, and Kirsten Zewers
Project Advisor: Jamshid Damooei, Ph.D. Professor of Economics Center for Leadership and Values, School of Business, California Lutheran University

1) Scope and Aim of the Research:

Agriculture has had many positive affects on the economy of Ventura County: harvesting many cash crops and exporting these crops to the rest of California, the United States and around the world. The aim of this paper is to present the trends and changes in agricultural production for major crops in Ventura County from 1970 to present. The paper also takes a glance at some of the economic reasons for the changes and highlights the future production constraints in the years ahead. The last three decades have been significant for the county because of the rapid growth experienced. In 1970, Ventura County had a

population of 376,430. In 1980, the population had risen to 529,174 and to 669,016 in 1990. By the year 2000, 753,197 people lived in Ventura County, (Forstall 1995)¹ with an estimated 791,130 in 2003 (U.S. Census Bureau 2003)². In just over 30 years, the total population of the county has risen over 110 percent. Although many new industries have become more prevalent in the county, agriculture still remains one of the largest. In 2000, agriculture “was the county’s eighth-ranked industry, accounting for 4.2 percent of total economic output for the region” (McLain 2004, 2)³.

2) Crop Pattern: *Change in Acreage and Real Value*

SOAR stands for Save Open-Space & Agricultural Resources. The city of Ventura used this original Napa Valley, California

Initiative passed in 1990 as a template for its own initiative because it had been held up by the Supreme Court. Ventura city voters eventually passed SOAR initiative in 1995. The City of Thousand Oaks measure was adopted the following year, and the Ventura County SOAR was approved in 1998. The SOAR measure is a General Plan Amendment requiring countywide voter approval of any changes in specified land use categories of the General Plan. This protects three land use categories: Open Space, Agriculture and Rural Land. Park land is protected by the Thousand Oaks measure. Since Ventura County is rapidly growing, the strategy is to focus building and growth in the cities themselves as opposed to expanding on to the agricultural land.

Although real estate prices in the county have risen exponentially in the 34 years studied and most significantly in the last 10, the farms still exist because they cannot be converted to houses. Therefore, agricultural production has varied slightly since 1989 (the first year for which total Ventura County agricultural production numbers were available).

¹ Forstall, Richard L. 1995. *Population of Counties by Decennial Census: 1900 to 1990* (online). Washington DE: United States Census Bureau, 1995 (cited December 9, 2004).

<http://www.census.gov/population/cencou/nts/ca190090.txt>

² U.S. Census Bureau. 2003. *California Quick Facts* (online) Washington DC: United States Census Bureau, 2003 (cited December 2, 2004).

<http://census.gov/acs/www/Products/Profiles/Single/2000/C2SS/Tabular/050/05000US061113.htm>

³ McLain, Jim. 2004 *Farms, Orchards are Big Business in the County* (online) Ventura: Ventura County Star, 2004 (cited December 8, 2004).

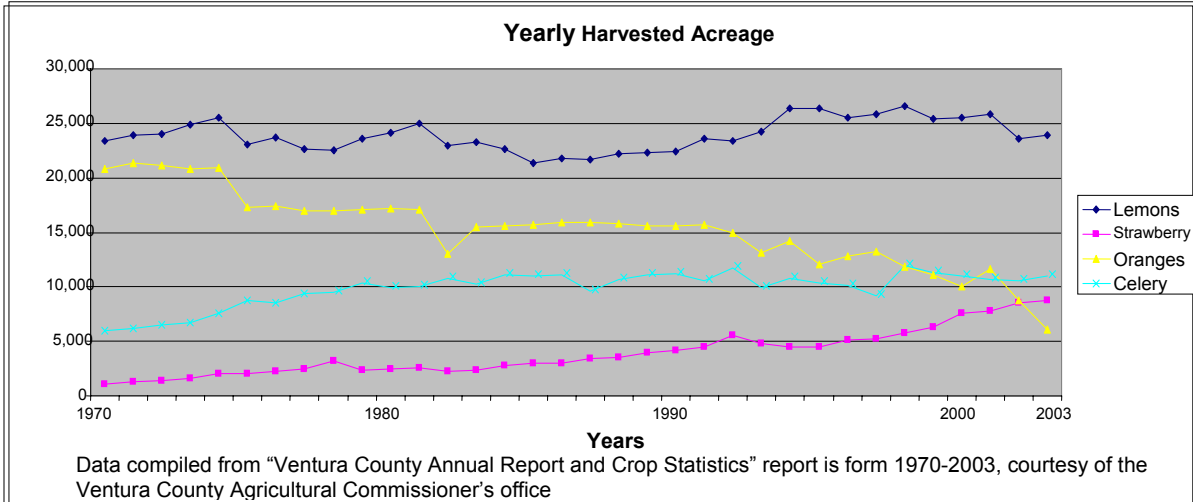
http://www.venturacountystar.com/vcs/lh_economy/article/0.1375.VCS_15201_3282470.00.html

From 1989 to 2002, total yearly harvested acreage has only decreased by about 6000 acres.⁴ From 1974 to 2002, we see an increase in

at a number of reasons, such as comparative market characteristics of various products, especially for the products with the highest

in the real value of orange production.

Although strawberry crops are more sensitive to



number of farms and an increase in percentage of land in farms, but not a significant change in approximated land in farms. Over the past 30 years, the land in farms has stayed fairly constant, only fluctuating about four percent. This is because the average farm size has decreased. The shift over the past 40 years has been towards a greater number of smaller farms.

Changes in patterns of production are caused by multitudes of economic reasons, which require a more extensive study than we could take on during the limited time of this research. This study looks

rate of growth or decline over the period of this study. One of the most important reasons for the change has been, and continues to be, the impact of international trade. We centered our attention on local economic reasons impacting the value of land, relative market value of various products, and possible environmental constraints that may impact production of these products over a foreseeable future.

The above chart presents the trend of changes in real value of major crops during the period of our study. The picture shows a gradual and consistent increase in total value of strawberries over the last decade. In contrast, there is a significant decline

abnormal seasonal changes resulting in more significant peaks and troughs (Belvedere Plantation 2004)⁵, they were most often worth five to ten times more per acre than an acre of oranges from 1970 to 2003. The lowest value per acre for strawberries recorded in the 34-year period (that of 1978) was still three times the value recorded for an acre of oranges that same year. At the other end of the spectrum, in 2000, an acre of Ventura County strawberries fetched 14.06 times the price of an acre of Ventura County oranges. Explaining economic

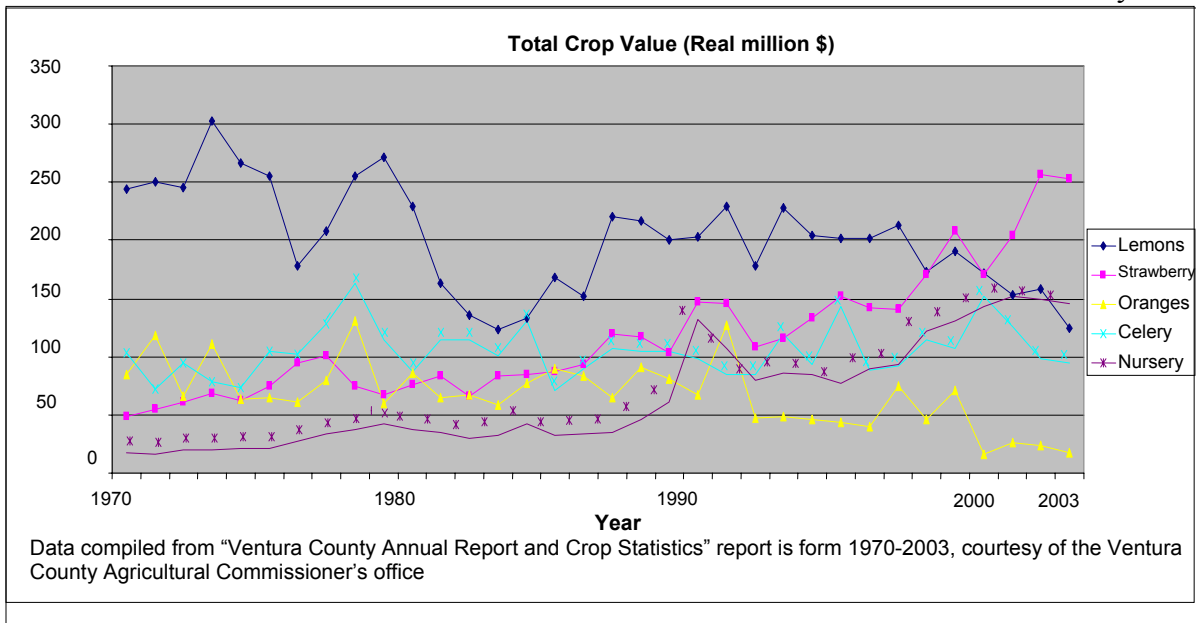
⁴ Ventura County Agricultural Commissioner's Reports, various years

⁵ Belvedere Plantation. 2004. *Strawberry Season 2004* (online) Fredericksburg: Belvedere Plantation, 2004 (cited December 8 2004) <http://www.belvedereplantation.com/contact.html>

reasons for the decline of relative price between strawberries and oranges or any other crops requires a more elaborate study. Nonetheless, we assessed some of the more obvious reasons of this decline.

November through June, and Brazil, the international supplier, has a harvest season running from July to January, there seems to be little room left in the global orange market (Minute Maid 2003)⁶.

very suitable for farming. However, the land is also highly valued as real estate.⁷ Just as the land is suitable for crops, the mild climate and proximity to Los Angeles are appealing to residents. Many people come to Ventura County for



Minute Maid, a division of the Coca-Cola Company, offers more insight as to possible reasons for the decline of the Ventura County orange crop. California oranges, they claim, are lighter in weight, have thicker skins, and contain less juice than their Florida counterparts. They also are less sweet. About 80 percent of California oranges are eaten while only 20 percent are used for juice compared to Florida's 80 percent used for juice and only 20 percent that are eaten. Since Florida's harvest season runs from

3) Farm and Home Real Estate

The coastal plain of Ventura County is unique and valuable because it is extremely mild and almost frost-free. The climate is suitable for subtropical fruits, year-round production of several vegetables, and a long harvest season for strawberries. This unique climate and good soil makes land in Ventura County

safe communities, good schools, and nearness to the city.

The following graph presents the average value per acre of farm real estate, which includes the values of land and buildings on farms. Looking at the average value in constant 1996 dollars, it did not change much from 1974 to 2002.

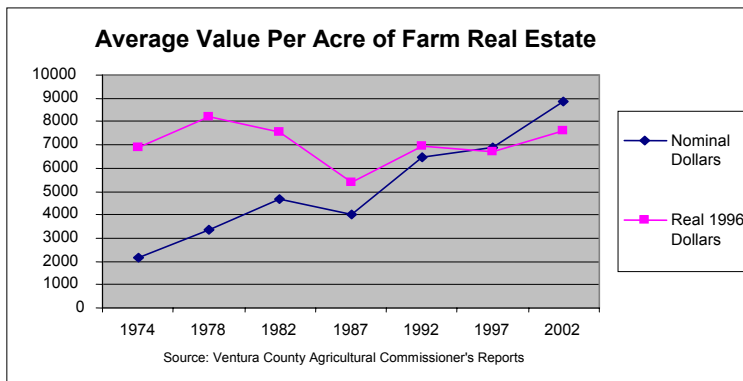
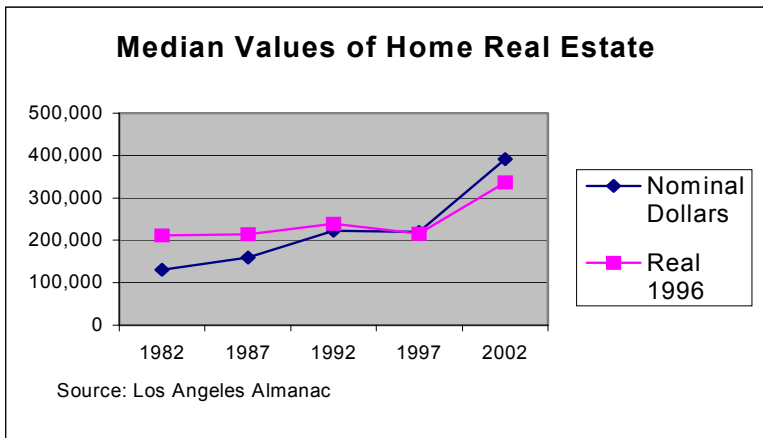
⁶ Minute Maid. 2003. *All About OJ* (online). Minute Maid company profile, 2003 (cited November 17, 2004) Available from World Wide Web: http://www.minutemaidd.com/mm_company/allaboutoj.html

⁷ George Goldman, and Jill McCluskey, *Agriculture in Ventura County: Its Impact on the County Economy*, California Agricultural Experiment Station, Giannini Foundation of Agricultural Economics (1995): 1.

The median values of residential real estate show a different story. The following graph shows the median values of home real estate, both in nominal and real 1996 dollars for 1982 through 2002. The first four years, the real values are about the same, but in 2002 the real value jumps from just over \$200,000 to about \$350,000. A reason for this could be that Ventura County has sustained an

As discussed before, initiatives such as SOAR are important to agriculture because land zoned for agricultural purposes are not to be rezoned for development without a simple majority of voters. The economic implication of saving our agricultural land, despite the obvious tendency of our local economy to use the land for

may become more difficult when certain environmental constraints are taken into consideration. On the other hand, greater future competition from international trade may create a considerable surplus of land in agriculture areas, and such development together with higher home prices and shortage of affordable housing may bring more pressure to re-evaluate SOAR in the years ahead.



increase in population without enough homes being built. According to basic economics, when there is an increased demand with a limited supply, the price will rise.

real estate, may continue to provide economic viability for increased agricultural production, particularly for high value cash crops. However, increase in production of some crops

4) Environmental Constraints: *Externalities of Agriculture in Ventura County*

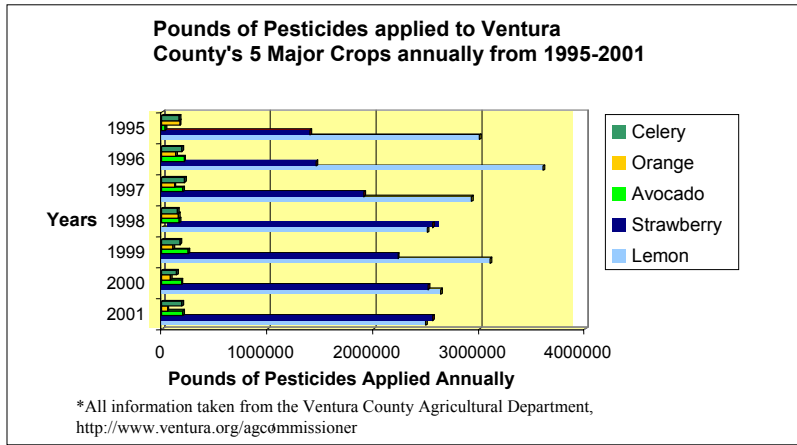
This paper shows that agriculture is an important economic activity in Ventura County. It provides jobs for its residents, contributes to its regional production, and creates significant exports. However, the resulting side effects from agriculture, specifically through pesticides, have negative consequences to the environment and human life in the surrounding residential areas. With specific data on pesticides and their effects on the air quality, it can be shown that non-organic pesticides are prevalent in Ventura County causing a low ambient air quality that is harmful to human health; especially children's health

and the wellbeing of those attending schools adjacent to the agricultural land.

There are many different classifications of pesticides for their different uses, however the pesticide category focused on in agriculture is the category of the “plant growth regulators”⁸. *Plant growth regulators* are defined by the California Department of Pesticide Regulation as, “Substances (excluding fertilizers or other plant nutrients) that alter the expected growth, flowering, or reproduction rate of plants through hormonal rather than physical action.”⁹

The following chart shows the total amount of pesticides used for the major crops in Ventura County over the period of 1995 to 2001. The type of pesticide includes a variety of different kinds. The amount used for each crop, to a great extent, varies with the volume or production.

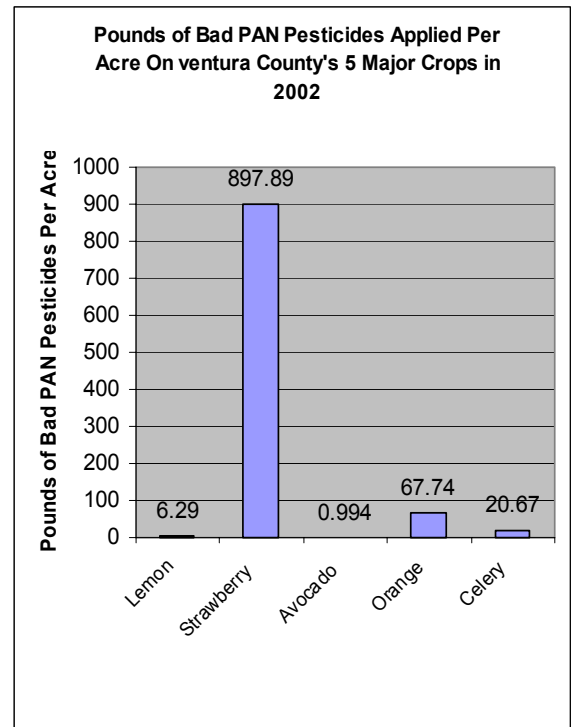
Knowing the poundage of pesticides applied to crops



annually is important, but only half of pesticide knowledge. There are many different types of pesticides, which range from organic to toxic. Toxic pesticides are known to be cumulative in nature and remain in a human body, only increasing with repeated intake of the toxins, whether through ingesting or inhaling. As the Environmental Protection Agency states it, “risk = toxicity x exposure”¹⁰. The greater the amount of toxins in a body, the greater the risk for dangerous health problems that toxic pesticides are known to cause.

The Pesticide Action Network (PAN) along with Californians for Pesticide Reform (CPR) has jointly created the category “PAN Bad Actor” pesticides, a group of the most toxic pesticides.

The chart below shows the use of such pesticides per acre of land used for production of major crops



in Ventura County in 2001.

*All data taken from the PAN Pesticide Database, <http://www.pesticideinfo.org/Index.html> and the Ventura County Agricultural

⁸ California Department of Pesticide Regulation, “What is a Pesticide?”, <http://www.cdpr.ca.gov/docs/factshts/what2.pdf>.

⁹ California Department of Pesticide Regulation, “What is a Pesticide?”, <http://www.cdpr.ca.gov/docs/factshts/what2.pdf>.

¹⁰ Environmental Protection Agency, “Assessing Health Risks from Pesticides”, 2003, <http://www.epa.gov/pesticides/factsheets/riskassess.htm#step%201>

5) Summary of the Findings:

- Although many new industries have become more prevalent during the last three decades in the county, agriculture still remains one of the largest.
- In large measures, due to the protection provided through SOAR, agricultural production has varied slightly over much of the period of this study.
- One of the most important reasons for the change in the county's crop production has been, and continues to be, the impact of international trade.
- Production of Oranges and the size of total land allocated to their production declined substantially. This shows a clear contrast with total value of strawberry production and land used to grow this crop.
- The highest acreage of land still goes to the production of lemons. The value of its total production has declined considerably during the last five years. Strawberry and nursery production have increased considerably.
- SOAR is important to agriculture because it protects land from rezoning without a simple majority of voters.
- Increase in production of some crops may become more difficult when competition from international trade and certain environmental constraints are taken into account.
- There will be an emerging need to find viable market use (value) for the possible excess land in the years ahead. This may create greater desire to pass countywide ordinances such as the defeated "proposition A" to buy land for preservation purposes, or pressure to re-evaluate SOAR.
- Non-organic pesticides are prevalent in Ventura County causing a low ambient air quality that is harmful to human health.
- The existing data for 2002 shows that the amount of Bad PAN pesticides applied per acre of land in Ventura County was relatively higher in strawberry production than any of the other five crops researched in this study. The ratio of such toxic substance for strawberry was over 900 times compared with Avocados, 140 times the

amount used for Lemons, 43 times with regards to Celery, and over 13 times compared with the amount used for Oranges.

