

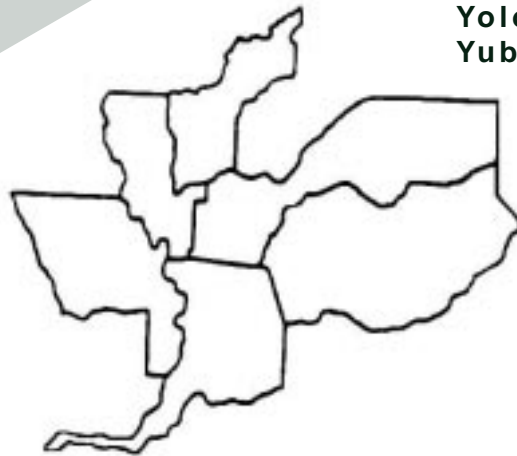


Agriculture in the Sacramento Region

Trends and Prospects

- **Commodities**
- **Farm Value**
- **Markets**
- **Land**
- **Policies**
- **Forum Summary**

**El Dorado
Placer
Sacramento
Sutter
Yolo
Yuba**



Agriculture in the Sacramento Region Trends and Prospects

Materials and summary from the forum:
The Future of Agriculture in the Sacramento Region
held February 14, 2000

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Introduction

by Ray Coppock

In the six counties of the Sacramento region (El Dorado, Placer, Sacramento, Sutter, Yolo and Yuba), both urban and rural residents have an important stake in the continued viability of agriculture. For most city dwellers, surrounding farmlands add substantially to quality of life. For most people in outlying communities, both livelihood and lifestyle are at issue. Throughout the region and its rapidly-growing urbanized centers, agriculture is an historic—and increasingly threatened—environmental and economic resource.

The Valley towns, especially, have strong agricultural roots with their 19th Century origins as farm trade centers surrounded by rich cropland. The foothills have less productive soils, but the communities there also have farming histories, with adjacent orchards and cattle grazing. Even the region's large city, Sacramento, has an agricultural tradition as a major food-processing center.

Obviously, the region today is much less dependent on agriculture as a source of jobs and income. A great diversification of local economies has occurred over the years, stimulated by (1) extensive population growth, transforming rural places into suburbs, (2) the arrival of new industries and service activities

and (3) technological advances in farming that reduce labor demands. Yet agriculture is still a very visible part of the landscape and remains a potent economic and environmental force.

A Look at the Issues

The future of agriculture in the Sacramento region—in particular, the ongoing prosperity of farms and ranches—is being shaped by trends in land use, in markets and in technology. These issues were the theme of the February 14, 2000 forum, “Agriculture in the Sacramento Region,” sponsored by the UC Agricultural Issues Center and the Green Valley Initiative (a coalition of business, agricultural and environmental interests organized to promote open space conservation in the Sacramento region).

In preparation for the conference, AIC research produced a statistical “portrait” of the region's agriculture. That report, updated as a result of the conference, constitutes Chapter 1 through Chapter 4 of this publication. The information presented in these chapters is essential for any informed discussion of the fate of farmland and open space in the lower Sacramento Valley.

Chapter 1 highlights the Sacramento region's leading agricultural commodities and their farm production value, describing farm production by county and commodity between 1986 and 1998. Overall, agriculture has a significant economic presence in the region. Through multiplier effects, agriculture is related to about 6% of the region's income and employment. Total farm value in the six counties was nearly a billion dollars in 1998, led by rice, winegrapes, and processing tomatoes.

Chapter 2 presents information on California's international exports of crops for which the Sacramento region is a major producer. Estimated export destinations and percentages for California are given as a model of likely export patterns for the Sacramento region's share of production. Processed tomatoes, walnuts, rice, prunes, and peaches are the commodities covered. All of these were among the state's top 20 export commodities in terms of value in 1998.

Chapter 3 provides an overview of current land use and recent farmland conversion trends in the six counties. These are presented with maps, charts, and tables derived from the California Department of Conservation, Farmland Mapping and Monitoring Program biennial reports. Between 1988 and 1998 roughly 2% (41,000 acres) of the region's agricultural land was converted to urban uses. Still, almost half the region's land area is in agricultural use today.

Chapter 4 summarizes the provisions of selected county and city general plans that deal

with the protection of farmland in the presence of urban growth. The general plans are motivated by many different rationales and use a variety of tools to protect farmland and regulate growth. Some jurisdictions are considerably more effective than others at minimizing the impacts of development on farmland.

Chapter 5 takes a different, and less statistical, approach, summarizing the context contributed by speakers at the forum. Those quoted include scientists, economists, resource agency managers and, not least, farmers and ranchers speaking for important sectors of agriculture in the Sacramento region. These informed viewpoints illuminate the problems and the possibilities that lie behind the statistics of growth and change outlined in the previous chapters, and also have much to contribute to any thoughtful discussion of the Sacramento region's farmland and open space.

CHAPTER 1

Commodities and Farm Production Value in the Sacramento Region

By Nicolai V. Kuminoff

Like much of California agriculture, farmland in the Sacramento region is marked by its diversity, productivity, and high value. In 1998 the 6-county region had a total farm value of nearly a billion dollars, producing over \$30 million of at least 11 different crops, including fruits, nuts, vegetables, livestock, and nursery products. The region is a significant producer relative to California and to the nation for its signature crops: pears, prunes, rice, tomatoes for processing, walnuts, and peaches. For all these crops California is the sole or a major producer in the United States, and the Sacramento region is a major producer in California. The region accounts for between 20% and 35% of U.S. farm value for prunes and processing tomatoes, between 10% and 15% for walnuts, peaches, and pears, and about 9% for rice.

Total Farm Value

Total farm value in the Sacramento region increased moderately between 1986 and 1998, though there were a few dramatic changes at the regional and county level. In nominal terms total farm value increased from \$746 to \$994 million. However, in deflated dollars total farm value decreased from \$986 to \$966 million.

Top Commodities

Most of the region's top crops in 1986 were still the top crops in 1998, and had increased in farm value. For example, rice and tomatoes for processing had farm values of \$90 and \$94 million in 1986, and by 1998 they had increased to \$147 and \$126 million, amid some fluctuation.

County Level Production

The six counties produce many of the same commodities, but differ in their areas of specialization. For some crops, like pears in Sacramento, production is heavily concentrated in a single county. But for most commodities, including rice, grapes, and tomatoes for processing, the bulk of production occurs in two or three counties.

Winegrapes

Perhaps the most dramatic change has been the farm value of grapes, which increased from \$13 million in 1986 to \$128 million in 1998. Virtually all grapes grown in the Sacramento region are winegrapes, and acres planted more than trebled during the 1990's. Much of the new planting occurred between 1996-1998, so that in 1998 almost half of the region's 21,000

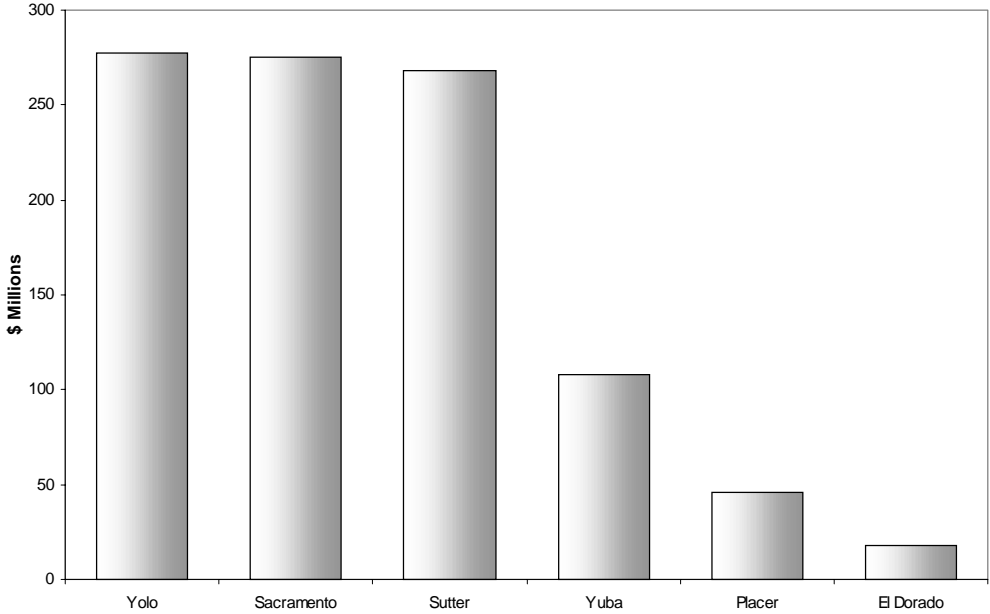
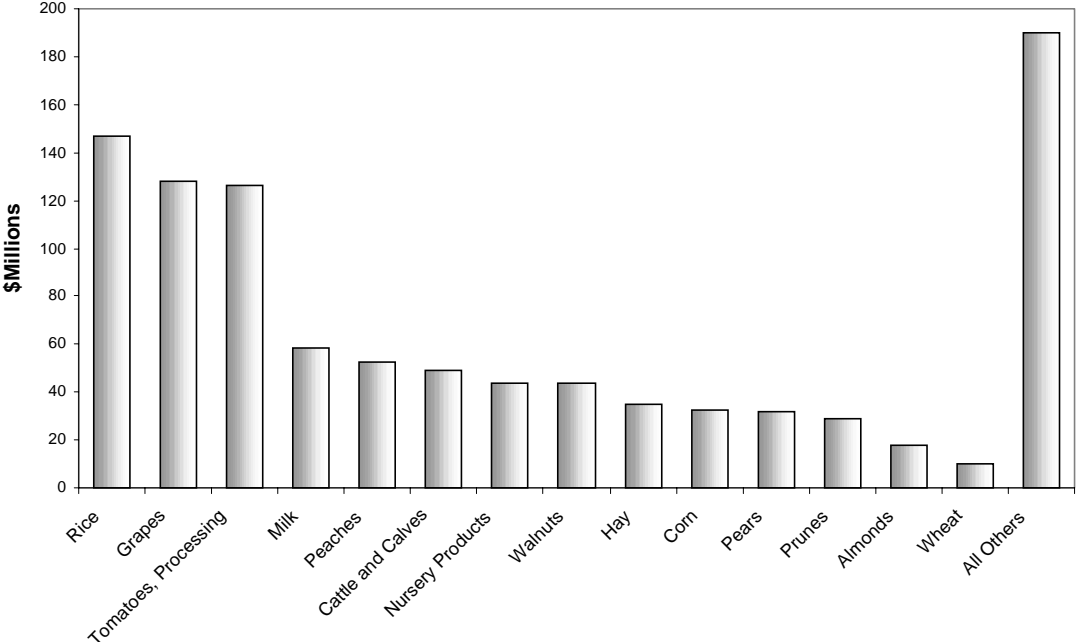
acres of wine grapes were non-bearing, ready to begin production in the next few years.

Economic Impacts

Agriculture and agricultural processing sectors create ripple effects in the Sacramento region's economy. Each dollar earned within agriculture fuels a more vigorous economy by stimulating additional activity in the form of jobs, income and output. In 1998, economic activity generated by agriculture and related industries accounted for about 6% of the region's total income and employment. Fruits, nuts and vegetables accounted for about half of the economic activity related to agriculture.

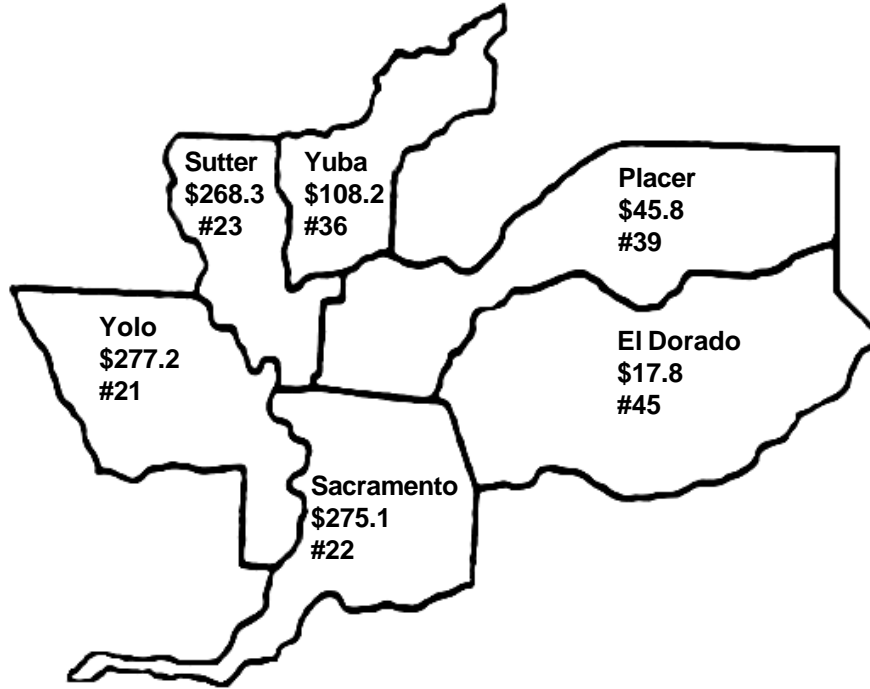
Sacramento Region Farm Value*, by Commodity and County, 1998

*Total Sacramento region farm value was about \$994 million in 1998



Source: California Agricultural Statistics Service, *Summary of County Agricultural Commissioners' Reports, Electronic Data, 1999.*

Total Farm Production Value (\$ Million) and Rank Among California Counties (#), 1998

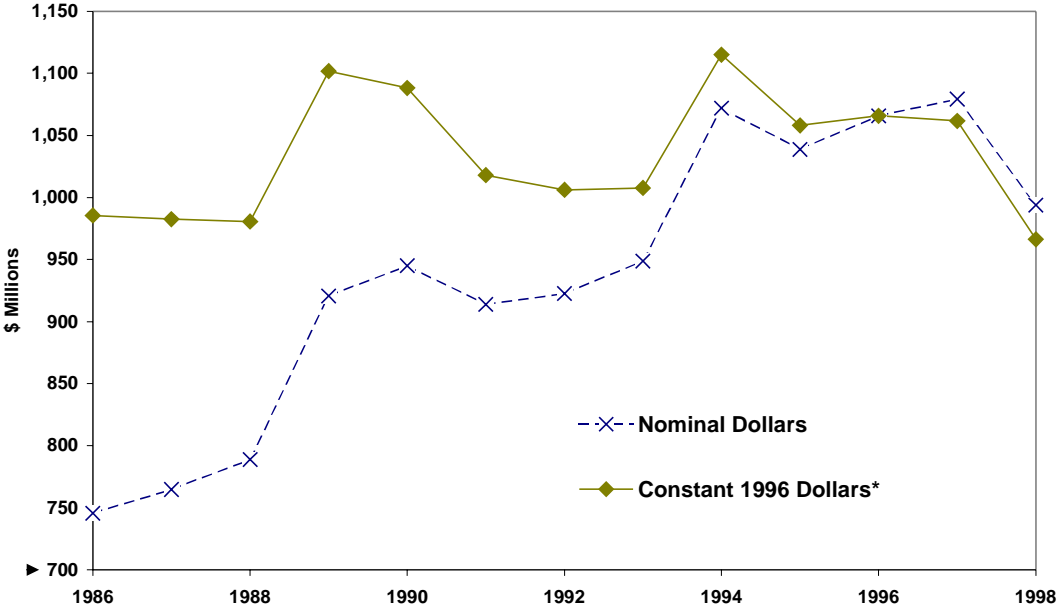


Farm Value of Top 5 Commodities by County (\$ Million), 1998

	El Dorado	Placer	Sacramento	Sutter	Yolo	Yuba
	\$	\$	\$	\$	\$	\$
Apples	5	Rice 12	Grapes 77	Rice 57	Processing Tomatoes 88	Rice 30
Grapes	3	Nursery Products 11	Milk 51	Peaches 35	Grapes 47	Peaches 17
Pasture	3	Cattle 10	Pears 30	Processing Tomatoes 26	Hay 26	Walnuts 15
Nursery	2	Pasture 4	Corn 19	Walnuts 20	Rice 12	Cattle and Calves 14
Cattle	1	Sheep and Lambs 1	Nursery Products 18	Prunes 17	Corn 10	Prunes 7

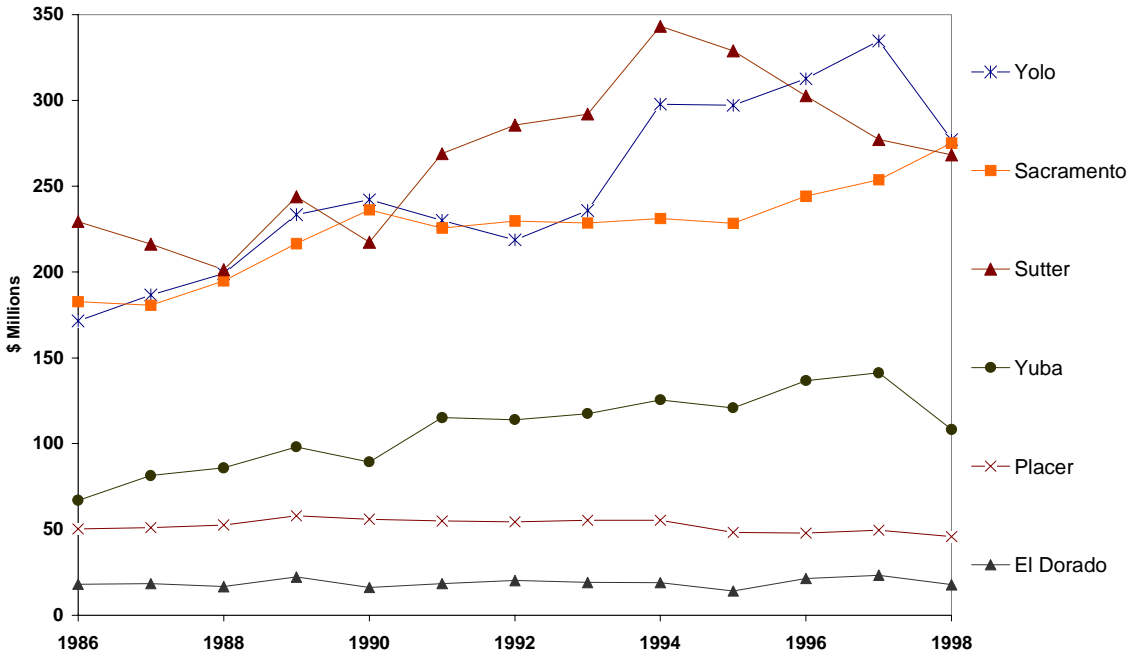
Source: California Agricultural Statistics Service, *Summary of County Agricultural Commissioners' Reports, Electronic Data, 1999.*

Total Farm Production Value in the Sacramento Region, Nominal and Deflated*, 1986-1998



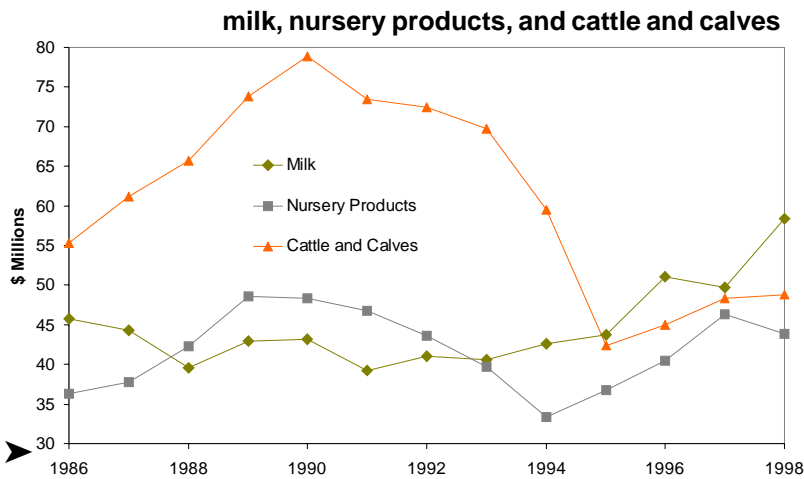
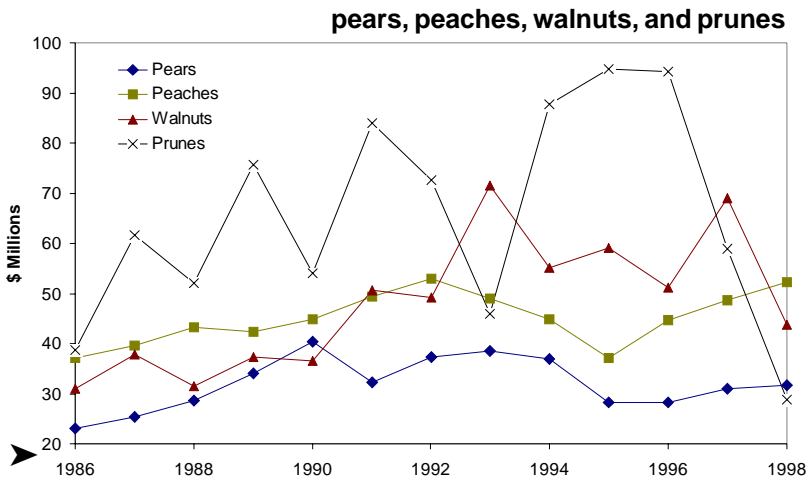
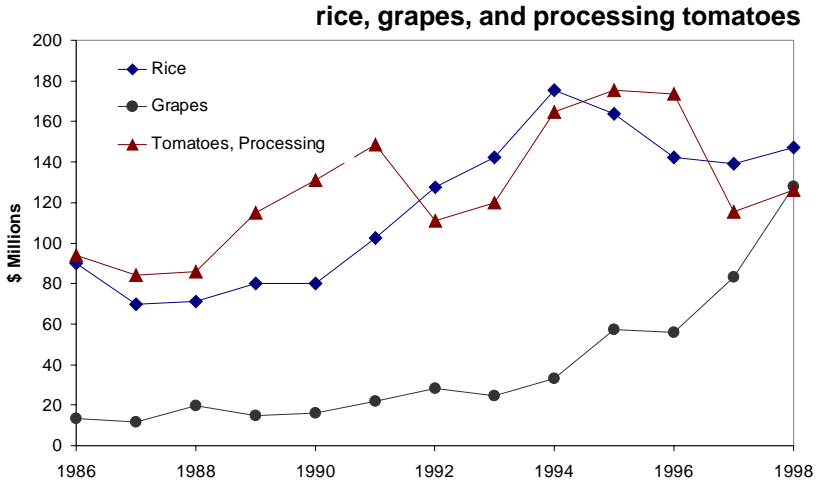
* Deflated using the U.S. Bureau of Economic Analysis, National Income and Product Accounts GDP Deflator.

County Farm Value in the Sacramento Region, 1986-1998



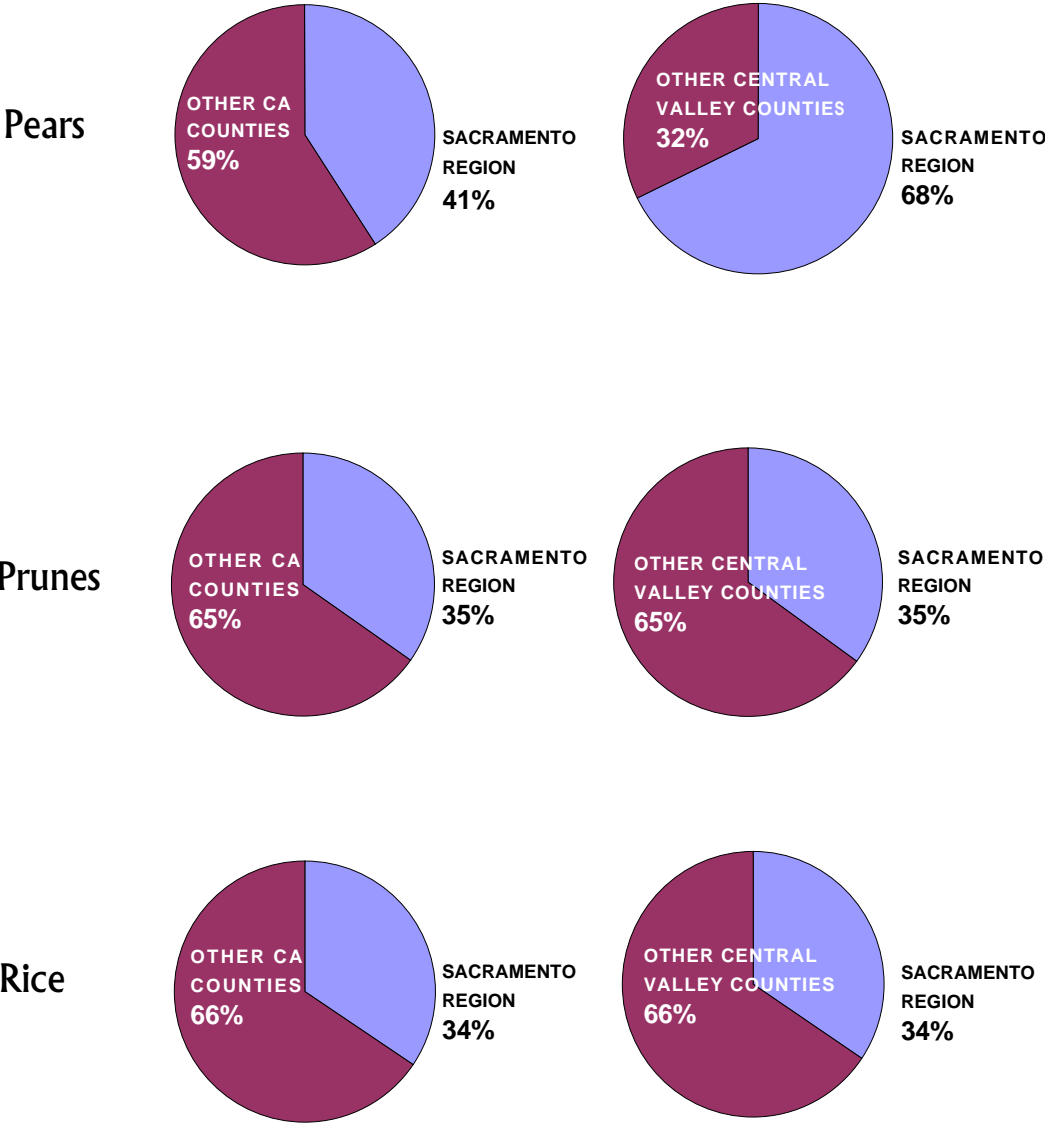
Source: California Agricultural Statistics Service, *Summary of County Agricultural Commissioners' Reports, Electronic Data*, 1999.

Sacramento Region Farm Value of Major Commodities, 1986-1998



Source: California Agricultural Statistics Service, *Summary of County Agricultural Commissioners' Reports, Electronic Data*, 1999.

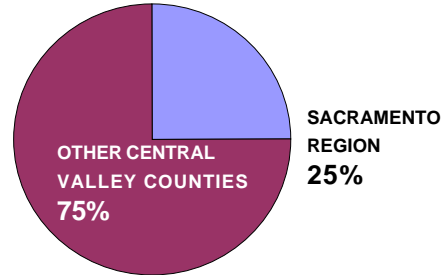
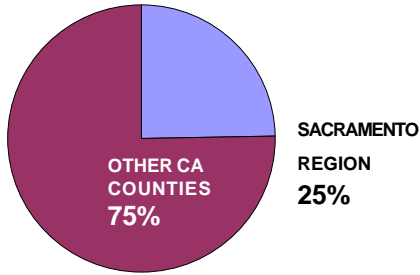
Sacramento Region as a Percent of the Central Valley and California for Major Commodities, by Farm Value, 1998



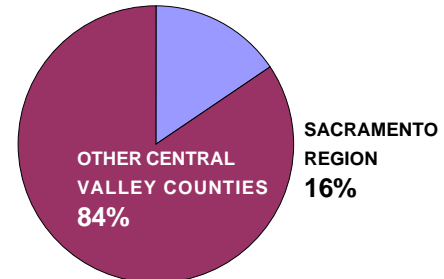
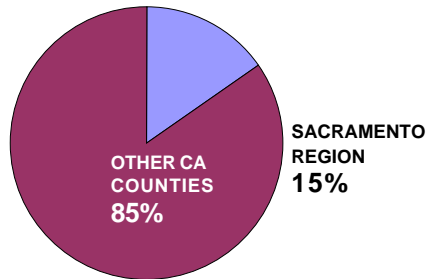
Source: California Agricultural Statistics Service, *Summary of County Agricultural Commissioners' Reports, Electronic Data*, 1999.

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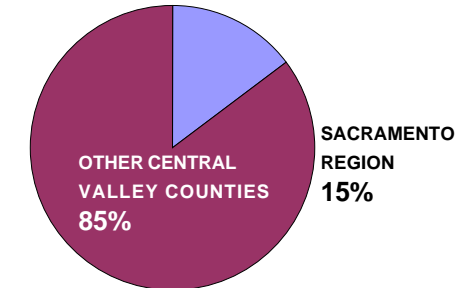
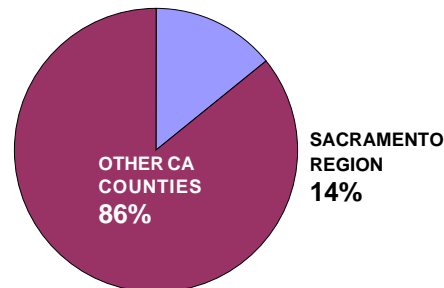
**Tomatoes,
Processing**



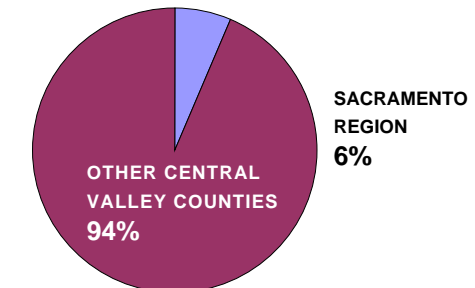
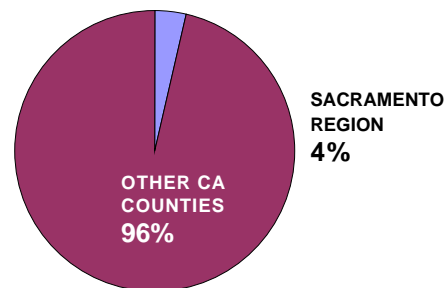
Walnuts



Peaches

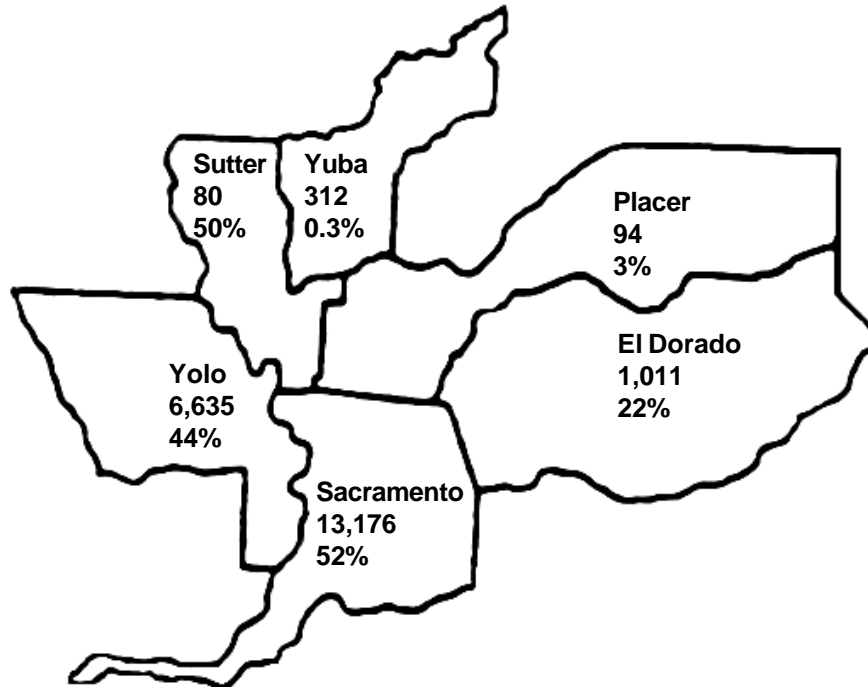


**Total All
Commodities**



Source: California Agricultural Statistics Service, *Summary of County Agricultural Commissioners' Reports, Electronic Data*, 1999.

Total Winegrape Acreage by County and Non-Bearing* Acres as a Percent of Total, 1998



Sacramento Region Winegrape Acreage, by County and Year Planted

County	1990 and Earlier	1998		Total
		Bearing	Non-bearing*	
El Dorado	575	784	227	1,011
Placer	78	90	3	94
Sacramento	3,885	6,350	6,827	13,176
Sutter	20	40	40	80
Yolo	1,929	3,703	2,932	6,635
Yuba	310	311	1	312
Sacramento Region	6,797	11,278	10,030	21,308

*non-bearing acres are those planted in 1996, 1997 and 1998.

Source: California Agricultural Statistics Service, *California Grape Acreage Reports, Online Data, 1999.*

Economic Impacts of the Sacramento Region's Food and Fiber Industry, 1998 (El Dorado, Placer, Sacramento, Sutter, Yolo, and Yuba Counties)*

Major Commodity Groups	Direct Sales \$1000	Impacts on Six-County Region			
		Sales \$1000	Total Income \$1000	Value Added \$1000	Employment No. of Jobs
Dairy Farm Products, Dairy Processing	355,892	588,338	213,510	229,428	3,535
Poultry & Eggs, Poultry Processing	15,569	26,021	9,780	10,391	190
Livestock & Products, Meat Packing, Prepared Meats	136,155	254,950	98,220	107,190	2,608
Cotton & Fabric/Thread Mills	2,611	4,166	1,666	1,804	37
Food/Feed Grains, Hay & Flour, Grain Mill Products	759,335	1,340,624	581,733	634,338	13,178
Fruits, Nuts & Vegetables, Processed Fruits/Vegetables	1,885,842	3,420,706	1,532,663	1,644,277	26,834
Sugar Crops, Misc. Crops, Sugar & Confectionery Products	522,342	978,529	333,845	364,104	6,955
Oil Bearing Crops, Vegetable Oils/Shortening	13,193	21,250	11,693	12,915	247
Malt Beverages	14,981	24,338	9,628	12,705	147
Manufactured Ice	5,938	11,095	6,784	7,107	201
Greenhouse/Nursery Products	37,956	58,353	42,939	44,525	548
Total	3,749,814	6,728,370	2,842,460	3,068,783	54,480
Combined County Totals (agricultural and non-agricultural)			46,921,109	57,236,697	851,800
% of Combined County Totals			6.06	5.36	6.40

Note: Combined Counties' Personal Income and Value Added are estimates.

Sources:

i) Combined Counties' Personal Income, 1998: Estimated applying 1997-98 % Change for California to 1997 Personal Income of Combined Counties (California Dept. of Finance).

ii) Combined Counties' Value Added, 1998: Estimated applying 1997 Ratio of State Product to State Personal Income (Bureau of Economic Analysis, Website data file).

iii) Combined Counties' Employment, 1998: Labor Market Information Division, EDD, Sacramento.

*Prepared by George Goldman and Vijay Pradhan using IMPLAN software, Department of Agricultural and Resource Economics, University of California, Berkeley, 2000.

CHAPTER 2

California's Exports of Crops Grown in the Sacramento Region

By Nicolai V. Kuminoff

California is integrated in national and global markets for many of its agricultural products, and international destinations are important markets for commodities produced in the Sacramento region, as throughout California. Between 1995 and 1998, California exported about 19% of its agricultural production to international markets annually. For some commodities, including prunes, processing tomatoes, walnuts, and clingstone peaches, California accounts for virtually all U.S. exports, while for other commodities it has a relatively small share. The Sacramento region is an important producer of some of the state's major export crops. Processed tomatoes, walnuts, rice, prunes, and peaches/nectarines were among California's top 20 export commodities in terms of value in 1998.

We have not seen any data to support the proposition that export destinations for the Sacramento region's share of agricultural production differ significantly from the rest of the state. In specific circumstances there are bound to be some differences based on the location of processors and shippers, contracts, and other factors. Unfortunately, processor location and a lack of data make it difficult to determine the county in which an exported commodity was grown. Estimated export

destinations and percentages for California are presented here to give a model of likely export patterns for the Sacramento region's share of production.

For most commodities a handful of countries represent a majority of the export value, and a multitude of countries each receive a relatively small portion of the remainder. Asia, particularly Japan, is the largest market for California's agricultural exports, followed by the European Union, Canada, and Mexico.

Processed Tomatoes

Processed tomatoes were California's 7th or 8th ranked export commodity in value between 1995 and 1998. Canada was the dominant destination in 1998, receiving about half the total export value, but processed tomatoes are shipped all over the world. Besides Canada, Japan and Mexico received more than 5% of the total quantity exported. The ratio of exports to production for processed tomatoes in 1998 was about 15%.

Walnuts

The ratio of walnut exports to production was about 26% in 1998, and the largest export

destinations were Japan and Spain. As shown in the table on page 15, four of the top six countries are part of the European Union, which if treated as a single country would be the largest export destination.

Rice

Japan is the top destination for California rice, receiving about half of the total export value. Other major destinations include Turkey, Canada, and Jordan. The ratio of exports to production in 1998 was about 23%.

Prunes

California is the largest prune producer in the world, growing an average of about 70% of the world's supply¹. Japan and the European Union are the top two export markets, each receiving about 30% of the total value. Compared with the other major Sacramento region commodities, a large percent of prune production (about 60%) was exported in 1997 and 1998.

Peaches

Almost all the peaches grown in the 6-county Sacramento region are clingstone peaches, bound for canning. Canada receives the greatest share of California's processed peach exports, followed by Japan, France, and Mexico. The California ratio of exports to production for all peaches and nectarines, including fresh fruit, is about 18%. Roughly two thirds of total peach exports were fresh peaches in 1998, and over half of California's peaches are grown for processing, so this ratio would probably be smaller for processed peaches.

¹ California Prune Board, "Prune History," Online Data, <http://www.prunes.org>

Major Destinations* for California Agricultural Export Commodities, 1998

Tomatoes, Processed	Rank	Approximate Percent
Canada	1	50
Japan	2	12
Mexico	3	6
Walnuts		
Japan	1	20
Spain	2	17
Italy	3	9
Germany	4	9
Canada	5	8
Netherlands	6	7
Israel	7	6
Rice		
Japan	1	48
Turkey	2	16
Canada	3	12
Jordan	4	6
Prunes		
Japan	1	30
Germany	2	15
Italy	3	12
Canada	4	6
United Kingdom	5	6
Processed Peaches		
Canada	1	31
Japan	2	13
France	3	8
Mexico	4	8

*Destinations receiving at least 5 percent of the exports for a commodity.

Source: University of California Agricultural Issues Center, *Agricultural Export Statistics*, prepared for CDFA by the Agricultural Issues Center, 1999.

Ratio of California Farm Quantity Exported to Farm Quantity Produced, 1998 *

Commodity	Farm Quantity Exported	Farm Quantity Produced	Ratio of Farm Quantity Exported to Farm Quantity Produced*
Units	Thousand farm gate units	Thousand farm gate units	Percentage
Tomatoes, Processed (short tons)	1,319	8,893	15
Rice (cwt)	7,390	32,698	23
Walnuts (short tons)	59	227	26
Prunes (short tons)	64	108	60
Peaches/Nectarines (cwt)	2,150	11,673	18

Source: University of California Agricultural Issues Center, *Agricultural Export Statistics*, prepared for CDFA by the Agricultural Issues Center, 1999.

*This ratio does not necessarily represent the share of 1998 production exported, since for certain commodities some 1997 calendar year production was exported in 1998 and some 1998 calendar year production was exported in 1999.

CHAPTER 3

Farmland and Land Use Trends

By Alvin D. Sokolow

Most of the information used to construct the tables, charts and maps in this section comes from the Farmland Mapping and Monitoring Program (FMMP). Housed in the Department of Conservation, the FMMP is California state government's official source of data on agricultural land conversions and other land use patterns. FMMP reports land use changes every two years (*Farmland Conversion Report*) for five categories of farmland (prime, statewide importance, unique, local importance, grazing land), urban and built-up land, other, and water. Soil surveys provide the base information for the reports, while information from aerial surveys shows two-year changes.

The FMMP program covers most of the 4.1 million acres contained in the six-county region. About 1.2 million acres in El Dorado and Placer counties, in the eastern mountainous areas of the two counties, are not inventoried.

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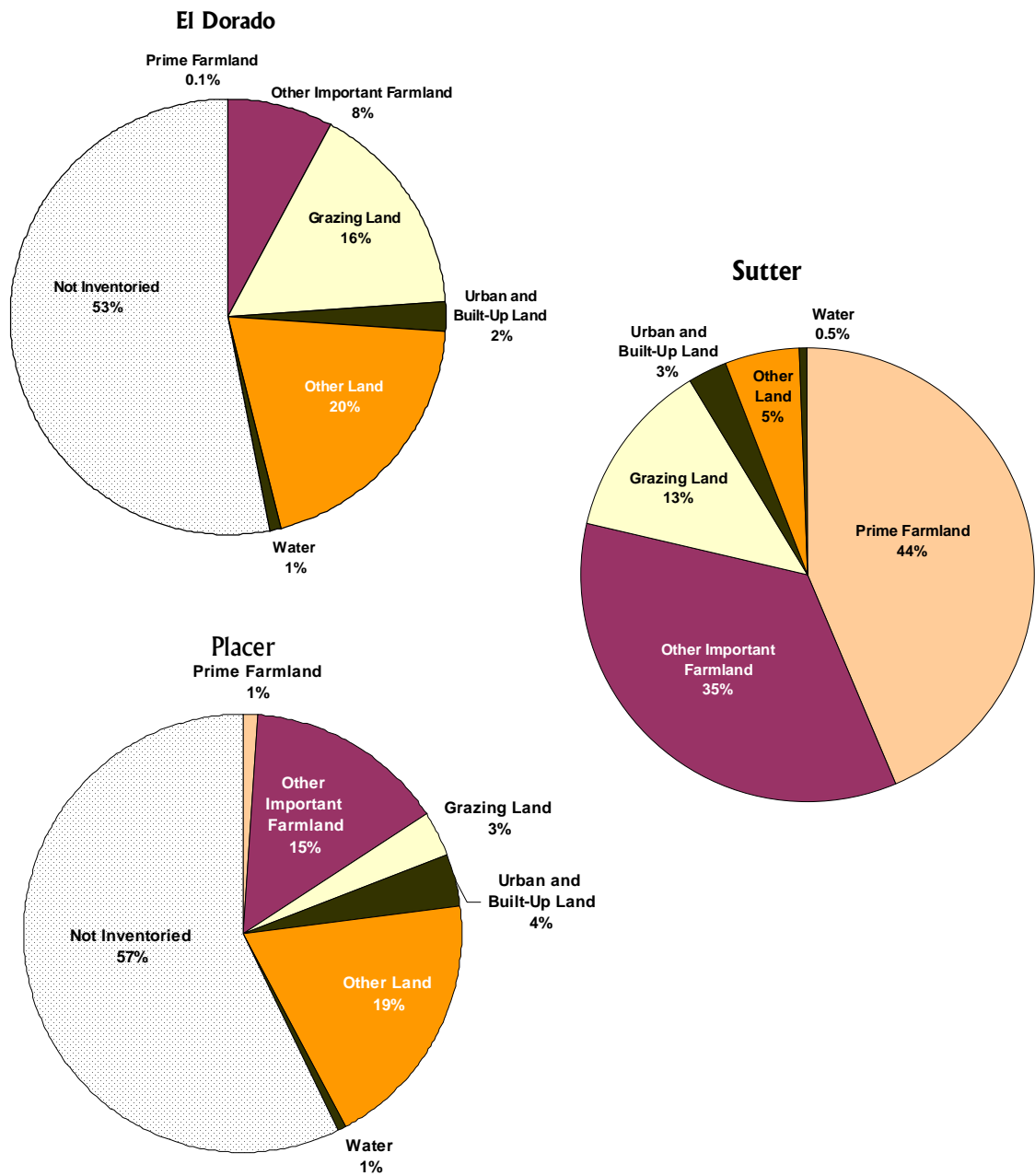
- A little more than 2 million acres, almost half of the region's total land area, is in agricul-

tural use. 1.3 million (615,000 prime) acres are in cropland, and 719,000 acres are used for grazing.

- Yolo and Sutter counties lead in the cropland (and prime farmland) category, accounting for more than half the region's total.
- In the entire region, about 41,000 acres were converted to urban uses from agricultural and "other" (formerly agricultural) land in the 10-year period of 1988-98. This was about 2% of the total farmland.
- Cropland (plus "other") conversions were about 28,000 acres in 1988-98, a little more than 2% of the total cropland base in the region.
- The largest conversion totals during the 10-year period for agricultural and "other" lands were in Sacramento (20,300 acres) Placer (10,600), Yolo (4,100), and El Dorado (3,100) counties. Sacramento County led in the number of cropland acres (10,400) converted, and Yolo was tops in the region in the number of prime farmland acres (2,500) converted.

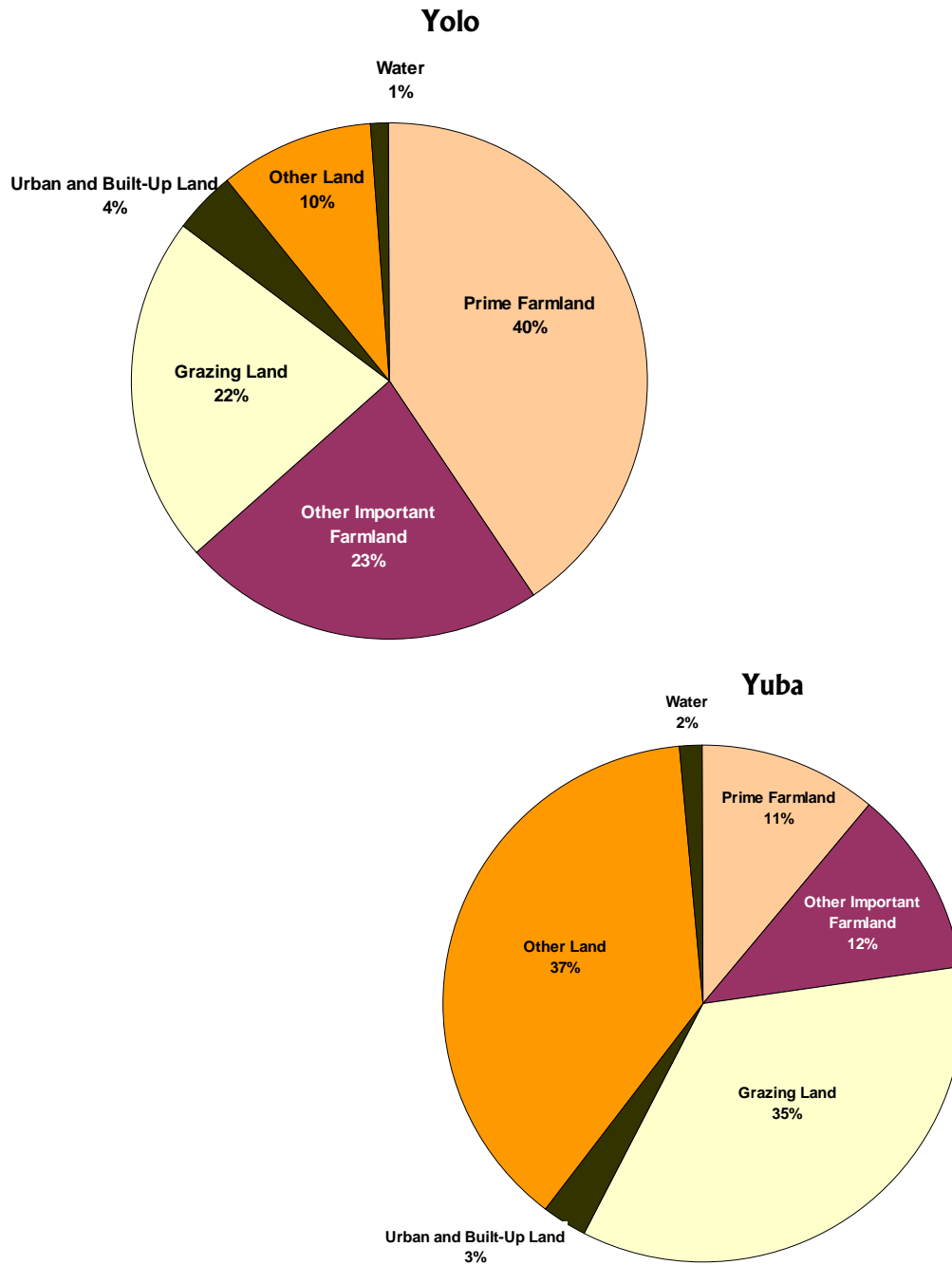
- About 675,000 acres of farmland are currently enrolled in the Williamson Act, about 47% of all the agricultural land in the six-county region. Sutter is the most recent California county to join the program, in July 2000. Yuba is the only county in the region, and one of the few in the state, that is not currently enrolled in the program. Yolo is the leading Williamson Act county in the region, with 427,000 contracted acres—76% of its total farmland.
- More than 82,000 acres of Williamson Act land are currently under nonrenewal (a nine-year phase out process) in the four counties with the program. Yolo has the largest amount of nonrenewal acres (36,000).

Sacramento Region Land Use by County, 1998



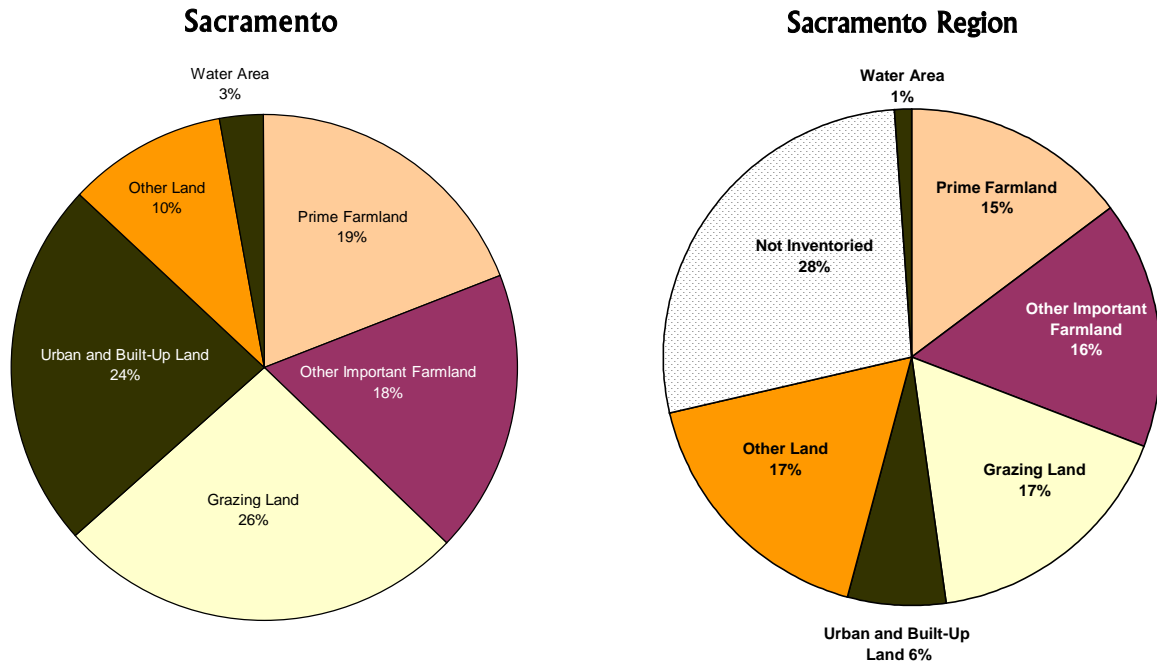
Source: California Department of Conservation, Farmland Mapping and Monitoring Program, *Online Data*, 2000.

Sacramento Region Land Use by County, 1998 (continued)



Source: California Department of Conservation, Farmland Mapping and Monitoring Program, *Online Data*, 2000.

Sacramento Region Land Use by County, 1998 (continued)

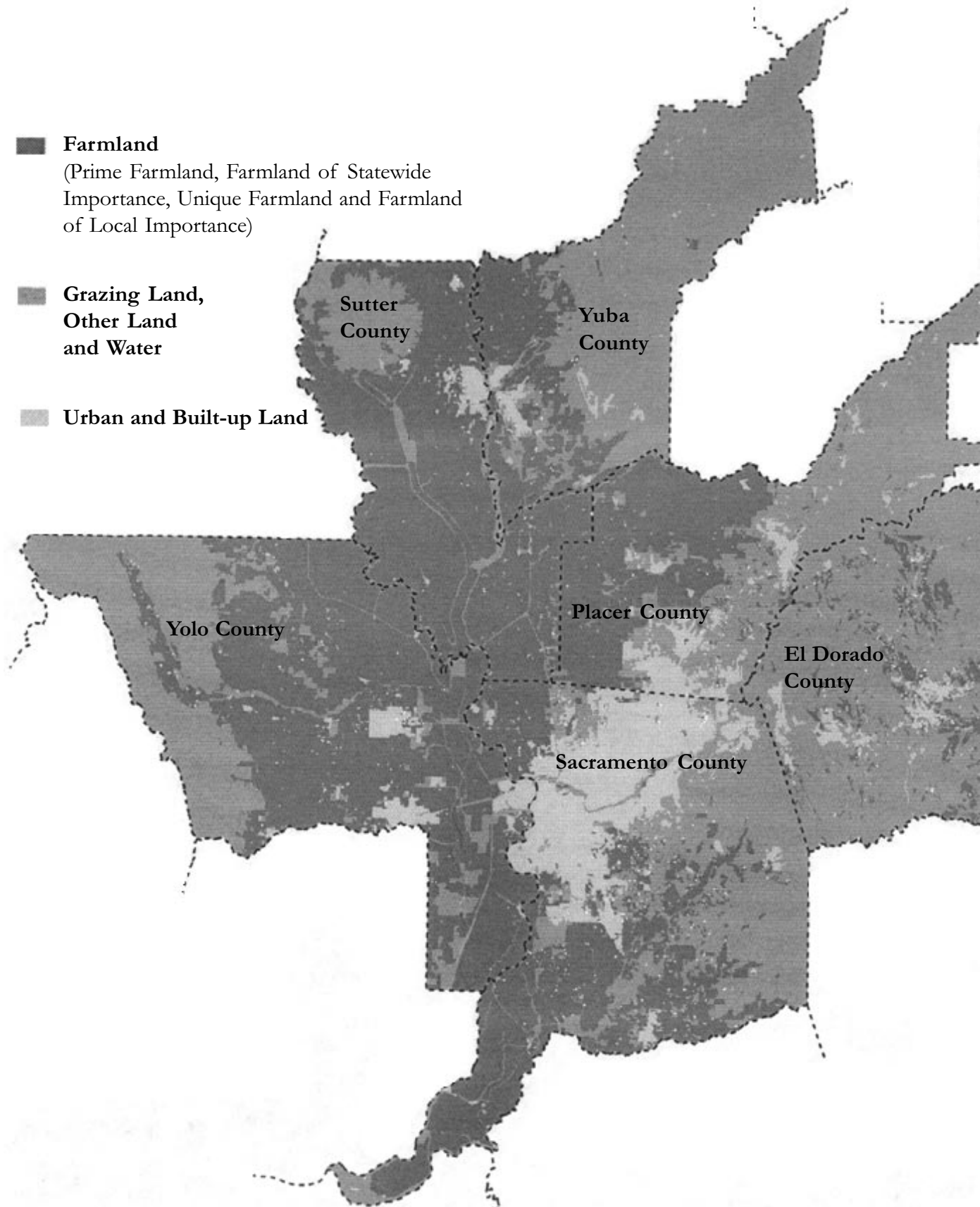


Sacramento Region Land Use, 1998 (Acres)

Land Use	El Dorado	Placer	Sacramento	Sutter	Yolo	Yuba	Sacramento Region
Prime Farmland	1,201	9,750	121,974	170,229	265,915	45,785	614,854
Other Important Farmland	86,945	142,374	114,966	135,915	147,748	47,960	675,908
Grazing Land	185,283	31,695	165,253	49,820	143,385	143,224	718,660
Urban and Built-Up Land	25,691	37,608	150,716	10,668	25,586	11,180	261,449
Other Land	230,404	185,057	64,922	21,045	63,446	157,476	722,350
Water	6,880	5,047	18,252	1,762	7,371	6,192	45,504
Not Inventoried	608,520	548,560	0	0	0	0	1,157,080
Total	1,144,923	960,090	636,083	389,439	653,452	411,817	4,195,804

Source: California Department of Conservation, Farmland Mapping and Monitoring Program, *Online Data*, 2000.

Sacramento Region Land Use, 1998*



* See appendix (page 48) for FMMP land use definitions.

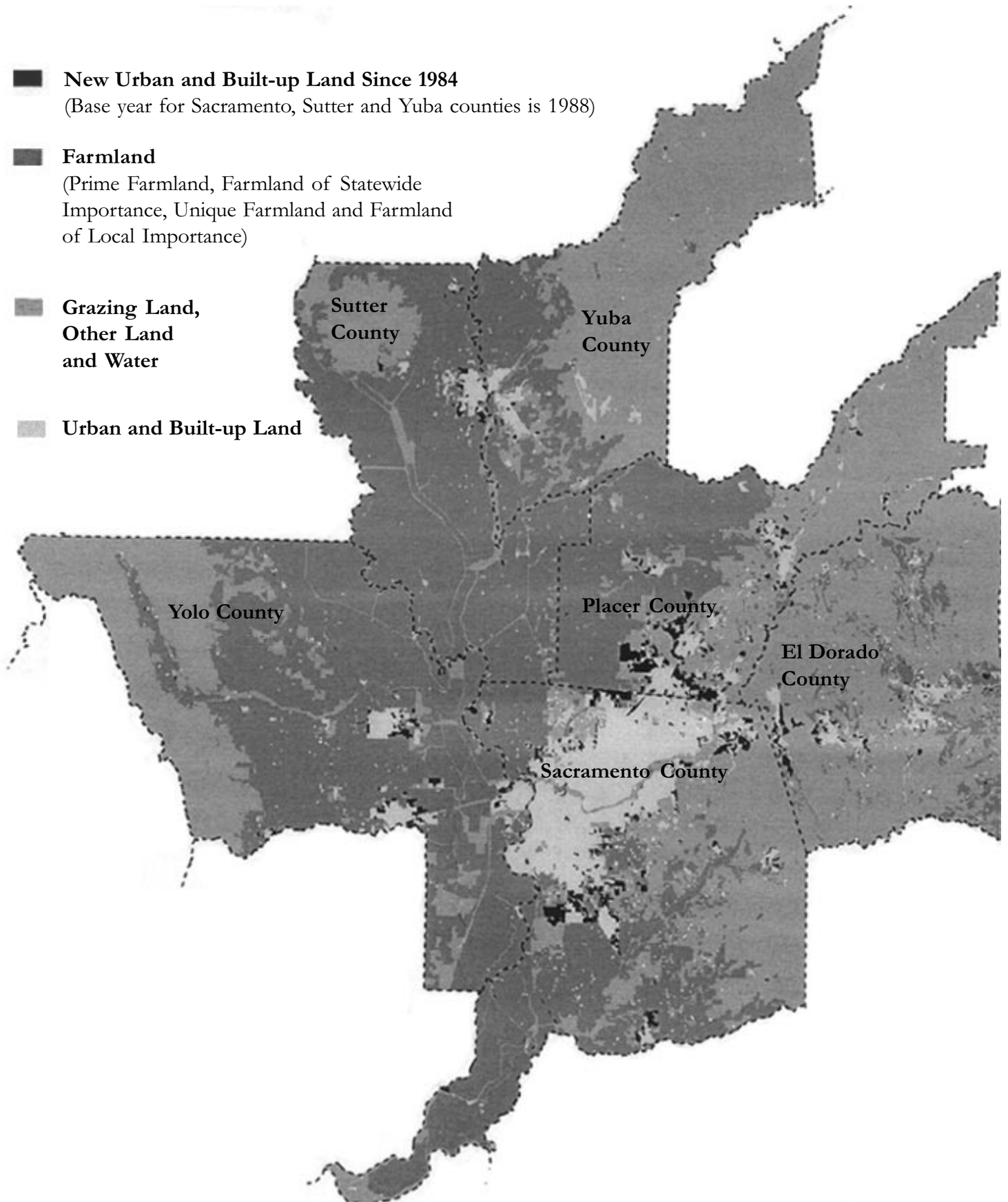
Sacramento Region Farmland Conversion 1984-1998*

■ **New Urban and Built-up Land Since 1984**
(Base year for Sacramento, Sutter and Yuba counties is 1988)

■ **Farmland**
(Prime Farmland, Farmland of Statewide Importance, Unique Farmland and Farmland of Local Importance)

■ **Grazing Land, Other Land and Water**

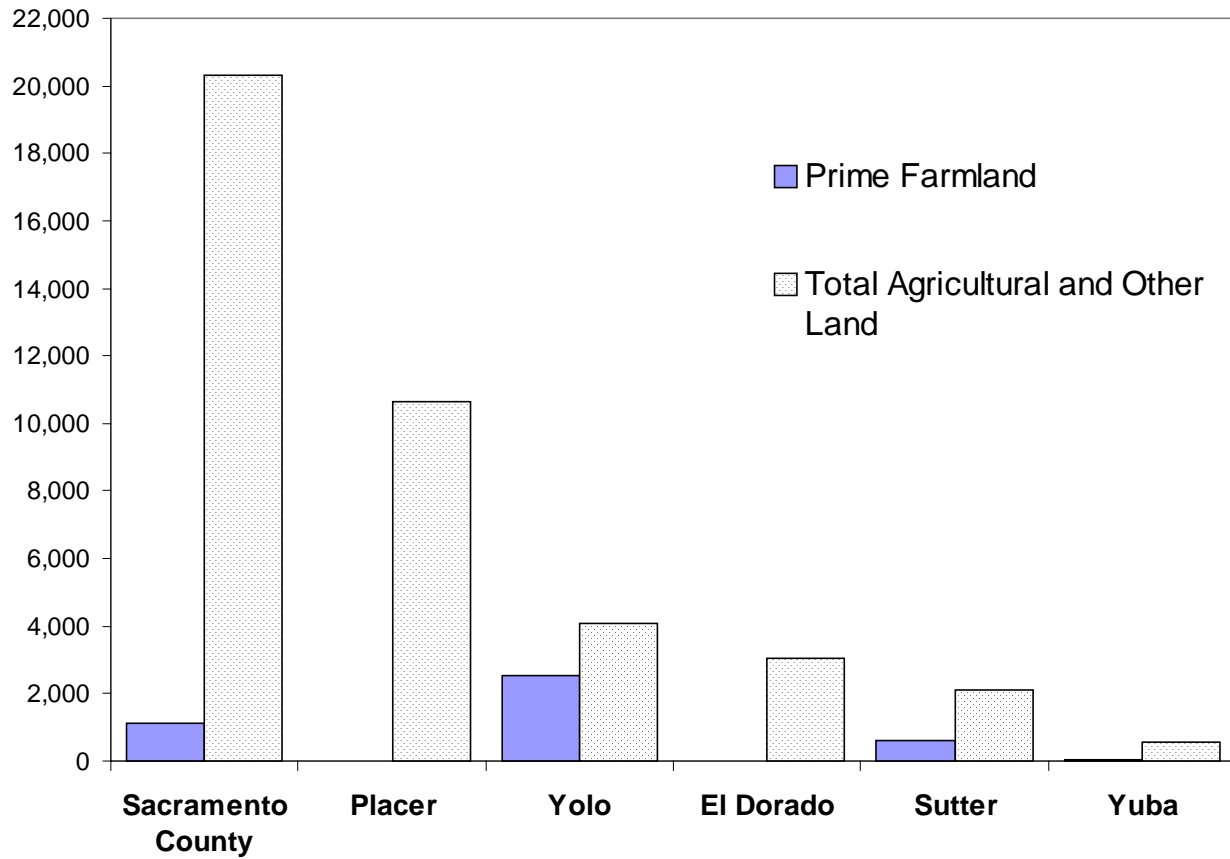
■ **Urban and Built-up Land**



* See appendix (page 48) for FMMP land use definitions.

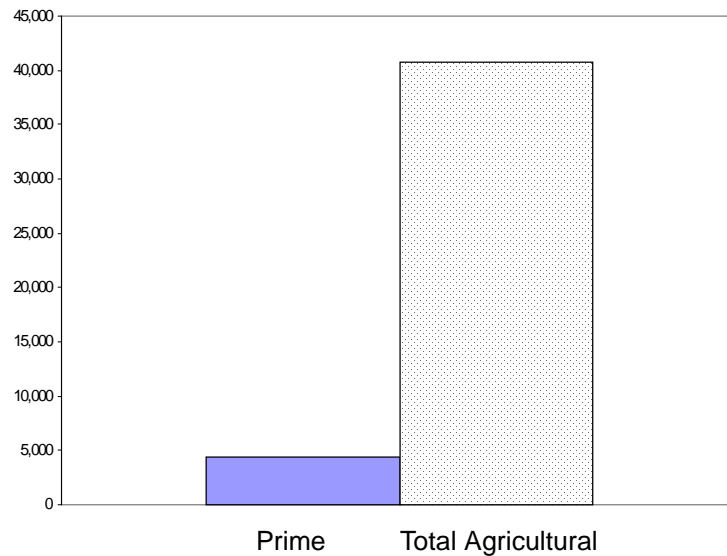
Source: California Department of Conservation, Farmland Mapping and Monitoring Program, 2000.

Acres Converted to Urban and Built-Up Uses, 1988-1998, by County



Source: California Department of Conservation, Farmland Mapping and Monitoring Program, *Online Data*, 2000.

Total Acres Converted to Urban and Built-Up Uses in the 6 County Region, 1988-1998



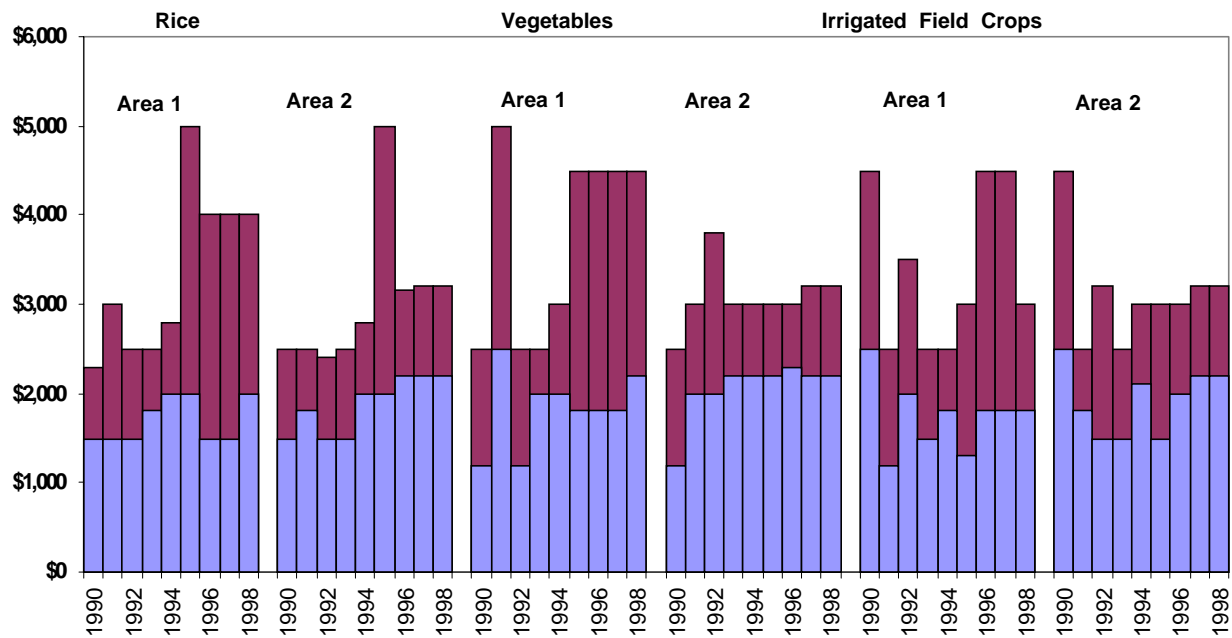
Percent of Total Farmland Acres Converted to Urban and Built-Up Uses, 1988-1998

Land Use	Sacramento	Placer	Yolo	El Dorado	Sutter	Yuba	6 County Sacramento Region
Prime Farmland	0.92%	0.01%	1.10%	1.92%	0.36%	0.09%	0.70%
Total Agricultural Land	5.05%	7.14%	0.86%	1.78%	0.59%	0.24%	2.03%

Source: California Department of Conservation, Farmland Mapping and Monitoring Program, *Online Data*, 2000.

Land Values for Agriculture in the Sacramento Region*, 1990-1998

Open Irrigated Farmland



Dark sections indicate ranges

Area 1: Yuba-Sutter Area (Feather River Basin and Sutter Basin)

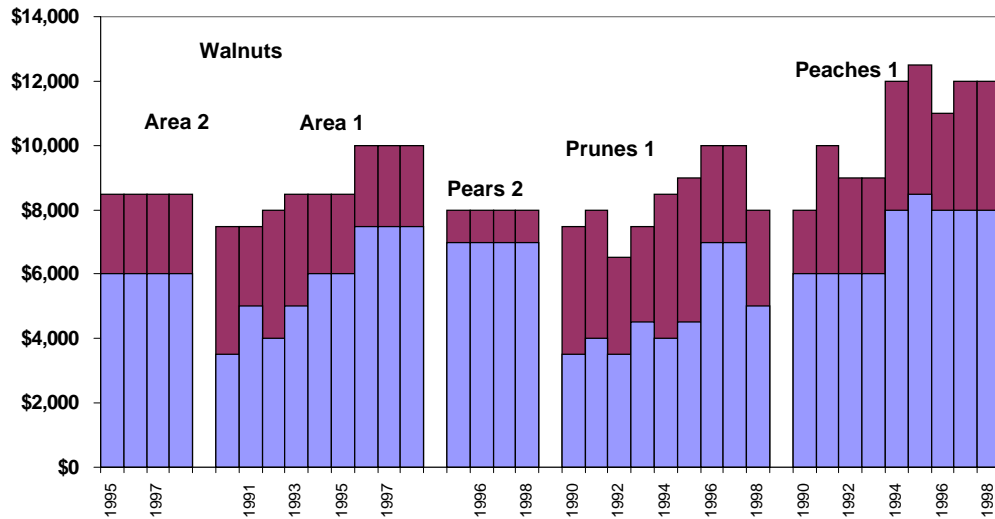
Area 2: Southern Sutter, Western Placer, Northern Sacramento, Yolo County

Source: American Society of Farm Managers and Rural Appraisers, California Chapter, "Trends in Agricultural Land and Lease Values," Spring Agricultural Outlook Forum, Sacramento, California, 4/30/99.

*Values were not available for El Dorado County, South Sacramento, East Placer and parts of Yuba and Sutter.

Land Values for Agriculture in the Sacramento Region*, 1990-1998

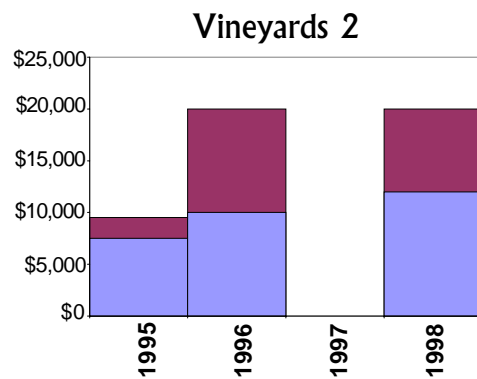
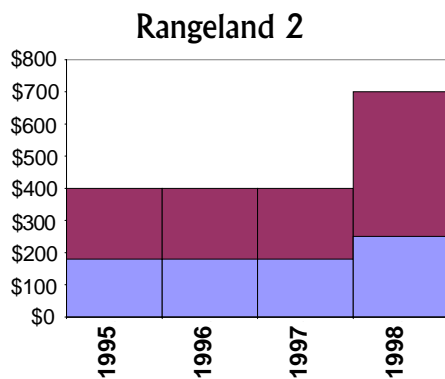
Fruit and Nut Crops



Dark sections indicate ranges

Area 1: Yuba-Sutter Area (Feather River Basin and Sutter Basin)

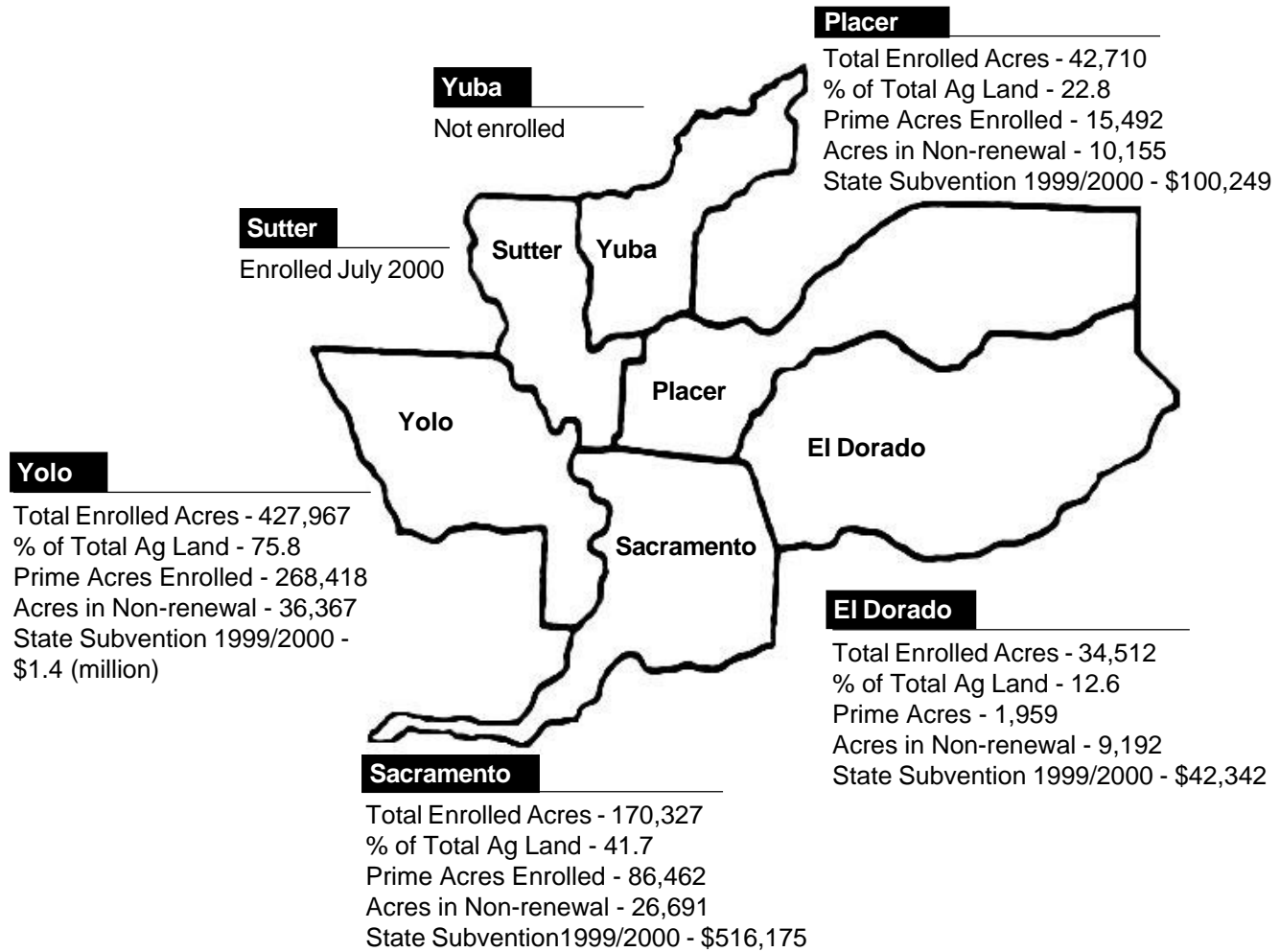
Area 2: Southern Sutter, Western Placer, Northern Sacramento, Yolo County



Source: American Society of Farm Managers and Rural Appraisers, California Chapter, "Trends in Agricultural Land and Lease Values," Spring Agricultural Outlook Forum, Sacramento, California, 4/30/99.

*Values were not available for El Dorado County, South Sacramento, East Placer and parts of Yuba and Sutter.

Williamson Act Trends for Counties and the Region, 1998-1999



4-County Totals

Total Enrolled Acres - 675,516
 % of Total Ag Land - 47.2
 Prime Acres Enrolled - 372,331
 Acres in Non-renewal - 82,405
 State Subvention - \$2.077 (million)

CHAPTER 4

Farmland Protection Policies in the Region

by Alvin D. Sokolow

The following pages summarize the provisions of county and city general plans in the Sacramento Region that deal with the protection of farmland in relation to urban growth. Especially for those jurisdictions located on the valley floor—counties with substantial irrigated cropland acreage and cities surrounded by irrigated farmland—the plans pay a great deal of attention to farmland protection. The formal language of these documents, however, is not necessarily an accurate indication of how much priority individual counties and cities give to this purpose in the day-to-day implementation of general plan policies—the ongoing decisions that affect the rate, direction, and form of urban development. Without getting into a detailed comparison, we can note that some jurisdictions in the region are much more effective than others in minimizing the impacts of new development on farmland conversion rates and on agriculture-urban edge encroachments.

As used by counties and cities in the region, the principal tools for implementing a policy to protect farmland include: (1) exclusive

agricultural zoning, with large minimum parcel sizes and limited allowable uses; (2) other restrictions on the location of rural residential uses in agricultural areas; (3) buffers at agriculture-urban edges; (4) Williamson Act contracts; (5) Right-to-Farm ordinances; (6) careful environmental review of development projects to mitigate farmland impacts; (7) LAFCO standards in reviewing city sphere of influence and annexations proposals; (8) conservation easements on farmland; and (9) county-city agreements that direct new development to cities, away from farm areas.

The most notable local government efforts to protect farmland in the region currently are the following:

- The active acquisition of conservation easements on cropland by the Yolo Land Trust, fueled by the city of Davis requirement (1995 ordinance) that urban development generating conversion must be mitigated through easements on comparable farmland elsewhere in the city's general plan area on a 1-1 acreage ratio. The Yolo Land Trust is currently the most active agricultural

easement program in the Central Valley. It has acquired to date easements on a total of 3300 farmland acres, 477 acres the result of the Davis mitigation requirement. Davis is the only city in California—and likely the only one in the United States—with such a development requirement.

■ *Placer Legacy*, a broad-based program in that county with strong citizen involvement and Board of Supervisors' backing, to protect agricultural and other open space lands. This program is concentrating on economic strategies for farming as well as land use and growth management. Largely as a result of their efforts, Placer County residents will vote in November 2000 on a quarter-cent sales tax to fund the conservation of open space.

■ Efforts by Sutter County to implement a buffer requirement for new residential subdivisions.

■ Discussions among nearby cities in a few parts of the region seeking to create agricultural greenbelts to separate urban communities expanding toward each other.

Farmland Protection in County General Plans

By Susan Kester

The general plans of Sacramento, Yolo, Sutter, Yuba, El Dorado, and Placer counties all pay some attention to minimizing the conversion of local farmland to urban uses. Based on the emphasis given to this goal and the level of detail describing the problem and policies, the Sacramento, Yolo, Sutter and Yuba plans seem to be relatively serious about farmland protection. Most counties group their goals and policies related to agriculture

in distinct sections devoted to this topic, usually in the Land Use and Open Space elements.

While the Yolo County plan does not contain a separate section dedicated to agriculture, it clearly states that agricultural land is to be regarded as the principal component of open space. The Placer and El Dorado documents have a combined Agricultural and Forestry Element, reflecting the varied topography and

economic diversity of these foothill and mountain counties.

All the plans refer to the pressures and changes that have accompanied increased urbanization in the past as well as the anticipation of continued growth. With the exceptions of Placer and El Dorado, the predominant rural land use in the region is agriculture. Increased population in a landscape dominated by agriculture leads some counties to acknowledge the necessity of balancing growth with the preservation of agricultural land. Most plans describe problems associated with the urban edge and lot splits for rural residential use.

The Sacramento, Sutter, and Yuba documents express concern that bedroom communities serving an increasing number of commuters with jobs elsewhere will continue to grow and eat into their surrounding farmland. A similar sentiment is echoed in the introduction to the El Dorado Agriculture and Forestry Element:

“In recent years, large influxes of new residents have resulted in increased development and thus a changed landscape. While this growth has benefited the County in many ways, the low-density residential growth has threatened important agricultural and forestlands.”

—Introduction, *Agriculture and Forestry Element, El Dorado County*

Sacramento County has the most detailed language regarding the causes and consequences of farmland conversion and increased urbanization in traditional farming areas. The plan elaborates at length on the many threats to farmland including the

seriousness of encroachments, not only by urbanization but also by wildlife preserves and outdoor recreation facilities. The urban edge is described in depth, cataloging the complaints from both farmers and urban neighbors.

Reasons for Preserving Agricultural Land

The rationales for protecting farmland stated in the plans emphasize either the economic benefits of commercial agriculture or the benefits derived from farmland as a natural resource, as noted in the table that follows. These benefits include open space, wildlife habitat, productive and healthy soils, and a rural life-style.

Policies

The six documents generally espouse the merits of directing urban growth away from land with productive soils, along with the land use strategies of contiguous development, clustered development, infill, and building at higher densities. Specific policies cited in all or most of the plans include: Williamson Act, Right-to-Farm ordinances, agricultural zoning, and permitting and encouraging agricultural services in agricultural areas. All six general plans identify the conditions under which urban conversion of agricultural parcels is appropriate, as the second table indicates. Yolo’s language, although relatively brief, is the strictest and allows the fewest exceptions.

Specific Techniques

Two specific protection techniques frequently cited in these plans are (1) the acquisition of conservation easements and (2) the establishment of buffers between farming and

urban areas. All the plans but Yolo's cite the desirability of placing easements on agricultural parcels through purchase or transfer of development rights, but without much detail about implementation strategy. Buffers are also mentioned in all the documents except Yolo's. The Sutter and Yuba plans get into some detail about buffer width and design.

Rationales Used for Protecting Farmland

County	Date of Land Use Element	Motivations
El Dorado	1996	<ul style="list-style-type: none"> ■ Provide future generations with opportunities to experience both the economic benefits and the rural lifestyle residents now enjoy
Placer	1994	<ul style="list-style-type: none"> ■ Support the continued viability of the agricultural economy
Sacramento	1993	<ul style="list-style-type: none"> ■ Maintain agricultural productivity and natural resource benefits ■ Maintain farming and related industries as strong and viable sectors of the economy
Sutter	1996	<ul style="list-style-type: none"> ■ Protect and enhance agricultural resources ■ Retain agriculturally related economic base
Yolo	1983	<ul style="list-style-type: none"> ■ Reduce the economic and environmental impacts of conversion
Yuba	1996	<ul style="list-style-type: none"> ■ Agriculture is both food, fiber and jobs, and open space

Conditions for Approval of Farmland Conversion

County	Policy for Allowing the Conversion of Farmland
El Dorado	Maintain in agriculture parcels 20 acres or larger containing choice agricultural soils zoned for agricultural uses, except where the Board of Supervisors finds economic, social, or other reasons to justify allowing non-agricultural development to occur
Placer	Maintain large parcel Ag zoning and prohibit the subdivision of agricultural land unless: <ul style="list-style-type: none"> ▪ Subdivision is part of a cluster project ▪ It will not conflict with adjacent agricultural operations ▪ It will not hamper or discourage long-term agricultural operations either on site or on adjacent agricultural lands
Sacramento	Not accept applications for general plan amendments designating prime farmland or lands with intensive agricultural investments to urban use unless: <ul style="list-style-type: none"> ▪ Development is contiguous to agricultural/residential or urban uses ▪ Applicant demonstrates no feasible alternative sites are available other than prime farmlands or lands with intensive agricultural investment
Sutter	County shall establish criteria to allow limited conversion of agricultural land. Criteria may include: <ul style="list-style-type: none"> ▪ Finding that conversion will not be detrimental to existing agricultural land ▪ Contiguous to existing areas designated for urban or suburban land use ▪ Finding that no other development opportunities are available within currently designated areas
Yolo	Land use policy prohibits urban development in agricultural areas; extension of service facilities, particularly sewers, and new residential or suburban subdivisions are prohibited in agricultural designated areas; zoning policies allowing for the timed conversion of agricultural land to urban uses
Yuba	Expansion on valley floor minimized; infill and intensification encouraged ; it is recognized that peripheral expansion provides unique and competitive economic development opportunities on the valley floor

Farmland Protection in City General Plans

by Alvin D. Sokolow

(Chapter 5, “How Cities Look to the Future: General Plans in the Sacramento Region,” Sustainable Communities Consortium and the California Communities Program, University of California, Davis July, 1999)

Communities in the Sacramento region have a long-standing association with agriculture. Within the six counties of Sacramento, Yolo, Sutter, Yuba, Placer, and El Dorado, the region contains 2.6 million acres of farmland, more than a third classified as prime. Farming generates about \$1.5 billion annually in direct production value, with a total economic impact of about three times as much when processing, supply and other associated activities are considered. The eastern third of Solano County, between and around the cities of Dixon and Vacaville, adds further to the larger farmland and farm value picture.

For many residents of the region, however, farmland is valued more for its open space attributes than its economic contributions. The region of course has other forms of open space, including flood plains and waterways, protected habitat, oaklands, and public recreation spaces. Furthermore, it is bounded on the east by the forested public lands of the Sierras.

What do the 18 municipal general plans say about these resources? We concentrate primarily on a review of farmland protection policies, following with a summary of open space provisions.

The Interest in Farmland Protection

Virtually every plan refers in some degree to the virtue of protecting the farmland on the city's flank. Relevant provisions usually are found in the land use, conservation or open space elements or sections of the documents. At least five plans treat the topic in a substantial way, with specific policy statements and some explicit standards. The table on page 36 summarizes the pertinent provisions of these plans. All were prepared by valley communities.

What then is the rationale for protecting farmland? Reasons relating to the open space character of farmland are most commonly cited in the general plans. Often this is phrased as helping to “define” a community's identity or helping to establish its borders visually, for foothill as well as for valley towns. Auburn sees the surrounding farmsteads, orchards, grazing, and horse ranches helping to maintain an “open rural character.” Farmland in some plans has the important task of keeping cities from growing into each other. Woodland's plan in addition refers to contributions of agriculture to the city's historic heritage.

The economic benefits of local agriculture are a much less cited rationale for protecting the surrounding agricultural acres. Only Woodland and Yuba City pay much attention to this factor among the cities listed in the table.

In support of these objectives and as background information, a few plans supply some description of the agricultural resources of their cities, providing details of soil types, crop types, and other characteristics. Surrounding agricultural soils of prime or Class I and II quality are cited by the Davis, Dixon, Woodland, and Yuba City documents. The foothill cities are surrounded by lesser quality soils, but Lincoln's plan identifies several small nearby areas of prime soil. Yuba City's plan details the market value of the tree and row crops grown in the city's vicinity. Maps in the Davis, Dixon, Lincoln, and Vacaville documents further display farmland characteristics, including in some the land that is enrolled in Williamson Act contracts.

Detailing soil and other agriculture-related resources in these plans is not always an indication of a farmland protection emphasis, however. In some cases, the information conveys the inevitability of future conversion to urban uses. So the soil characteristics described in a few plans stress their adaptability (relative erosion, absorption of wastewater, hydrology, etc.) for urban construction. The Yuba City plan notes that in an area of 12,000 acres that generates about \$25 million annually in farm income, 4,500 acres were designated for urban development by previous plans. The Dixon plan similarly states that:

“...it will be necessary to accept the conversion of some Class I and II soil to urban uses to enable future development.”

In the same vein, according to the Sacramento document, the city was built “on some of the most fertile soil found anywhere,” and the eventual buildout in the North Natomas area will leave only 190 acres of agriculturally-zoned land out of an original total of 6,730 acres.

Forms of Protection

Farming on much of the land surrounding cities in the region thus is a temporary activity, awaiting the eventual spread of urban development. References to the need to avoid the “premature” conversion of farmland in some general plans is a suggestion that local government policies can only slow down the rate of conversion, not stop it. On the other hand, the five plans cited in the table and individual provisions in a few others present a more long-term and less ambivalent approach to farmland protection. Beyond general statements about compact and contiguous development and the avoidance of urban “encroachment” into agricultural areas, there are these more specific policies and standards:

Urban Limit Lines

Boundaries intended to constrain urban development in particular areas, and hence provide long-term protection for agricultural operations, are a widely-discussed technique in northern California. Among our 18 cities, Woodland has the most definite and most long-standing urban limit line. The city's general plan refers to a line in place for some

years on its western border and expresses the intention to wrap other sides of the city in a permanent line.

Buffers

Recognizing the conflicts between adjacent farms and urban residences, several plans discuss the use of optional or mandated buffers to separate incompatible land uses. They are applied also in a few documents to separate residential and industrial uses. The Davis, Live Oak and Vacaville plans are the most detailed in presenting specific width and other standards for the creation of farm-house buffers. But it is not clear from any of the plans what clearly designated buffers actually exist in these cities. Some documents cite right-to-farm policies, established in separate ordinances and requiring that new homebuyers in areas adjacent to farms be notified of the impacts of agricultural activity.

Mitigation

Several plans cite the desirability of having urban development pay for the loss of farmland by funding easements or other forms of long-term protection on productive acres elsewhere in the area. But Davis currently is the only city in the region with an active mitigation program, cited in the general plan as the city's Farmland Preservation Ordinance.

Inter-governmental cooperation

Counties, not cities, have the major job of protecting farmland, a few plans suggest, since almost all agricultural operations are in unincorporated areas. Only Woodland's plan gives substantial attention to city-county

cooperation in this regard, noting the intergovernmental agreement that avoids new urban development on municipal fringes but directs it to city areas. Vacaville's plan cites a different kind of intergovernmental agreement—one proposed with the Solano Irrigation District to support continuing farming outside of designated urban service areas.

In addition to such farmland provisions, a few plans express support for the local services and facilities required by production agriculture. Woodland encourages the location of support industries in the city, promotes a farmers' market, and wants to provide "its fair share of adequate housing" for farm workers.

The Davis plan finds that specific state legislation protecting agricultural operations against noise-related nuisance actions applies to a local food processing plant, encourages residents to purchase food from local farmers, supports agricultural education projects for urban residents, and encourages "Sustainable and organic forms of agriculture."

City General Plans with Substantial Farmland Protection Policies and Standards: Drawn from 18 City Plans in the Sacramento Region

City	Motivation(s)	Policies and Standards
Davis	<ul style="list-style-type: none"> ▪ Protect prime soils ▪ Protect habitat ▪ Allow for ag in city's vicinity. ▪ City identity ▪ Visual amenity 	<ul style="list-style-type: none"> ▪ Mitigate farmland loss through developer compensation, under Farmland Preservation Ordinance ▪ Buffers at 150-foot minimum to minimize ag-urban conflicts, provide open space (Urban Agricultural Transition Area) ▪ Discourage development in areas of Class I and II soils
Live Oak	<ul style="list-style-type: none"> ▪ Not clear 	<ul style="list-style-type: none"> ▪ Ag lands surrounding city shall not be converted and will be protected from effects of urban development ▪ Permanent open space buffers between ag and urban uses ▪ Adopt ordinance requiring developers to establish 300-foot buffers
Vacaville	<ul style="list-style-type: none"> ▪ Open space ▪ Protect prime soils ▪ Establish city boundaries 	<ul style="list-style-type: none"> ▪ Use buffers to minimize ag-urban conflicts; minimum 500-foot separation between residential and ag uses ▪ Establish standards for hillside ag areas ▪ Agreement with Solano Irrigation District to establish urban service lines
Woodland	<ul style="list-style-type: none"> ▪ City identity and definition ▪ Major role in city's economy 	<ul style="list-style-type: none"> ▪ Urban Limit Line; city to consider permanent line to preserve farmland in perpetuity ▪ Continuation of ag use within Urban Limit Line until need for development is demonstrated ▪ Require development to minimize conflicts with adjacent ag uses ▪ Support county's ag preserve program
Yuba City	<ul style="list-style-type: none"> ▪ Protect "ideal agriculture environment" (topography, soils, water, climate) ▪ Economic benefits of ag ▪ Ambience and definition of edges 	<ul style="list-style-type: none"> ▪ Compact development around urbanized core to avoid "unnecessary conversion" of farmland ▪ Encourage infill, discourage urban encroachment into ag areas outside city ▪ Maintain adequate parcel sizes for ag operations outside developed areas

CHAPTER 5

Farmland and Open Space: Insights and Opinions

Summary of Speaker Comments at the forum February 14, 2000

By Ray Coppock

Panel

REGIONAL TRENDS AND PROJECTIONS

Commodity Patterns and Values

Karen Klonsky

*Cooperative Extension Farm Management Specialist,
Department of Agricultural and Resource
Economics, UC Davis*

From the viewpoint of farm viability and land use, two important regional (as well as national) trends in agriculture are

- Generally lower farm prices, especially in recent years, combined with a long-term steady increase in farm costs.
- More small family farms that depend primarily on off-farm income. Nationally, more than half of all farms are in this category.

In the Sacramento region, agricultural commissioners report a long-term trend away from field crops, which still occupy most acreage, and toward orchards, vineyards and vegetable crops.

In total value of production, field crops and tree-and-vine crops lead the list of agricultural income producers in the region, with vegetable crops

third. Nursery crops, with very little acreage, also have contributed notably to regional agricultural income in recent years.

Within the region's tree and vine sector, grapes now lead in production value, having increased sharply since the mid-1990s, although walnut acreage remains larger. Almonds have declined in both acreage and value.

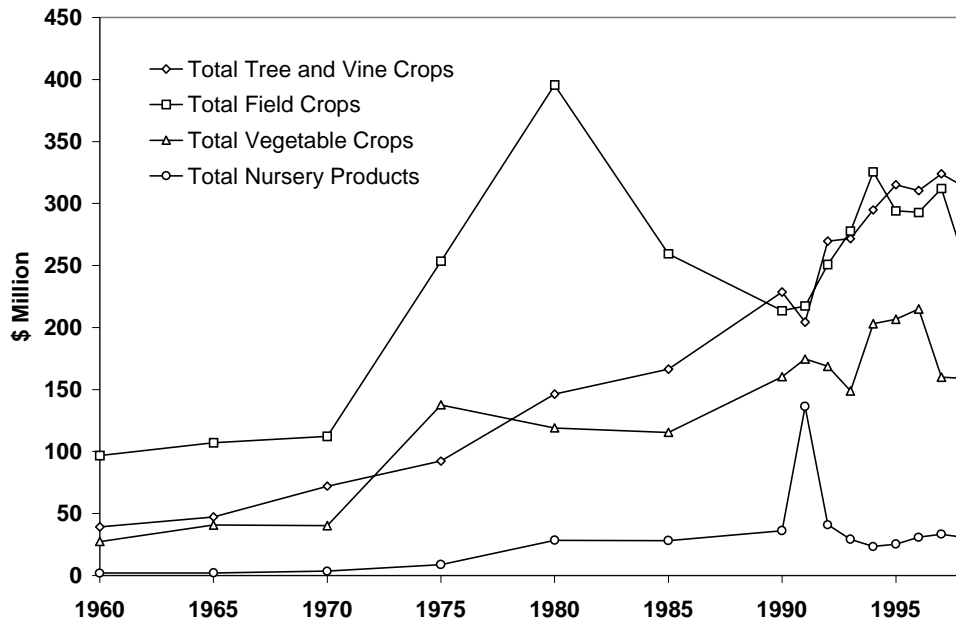
Markets

Daniel A. Sumner

*Frank H. Buck, Jr. Professor, Department of
Agricultural and Resource Economics, UC Davis;
Director, UC Agricultural Issues Center*

Although agriculture is important in this region, it does not dominate because of the overall size of the metropolitan area's economy. Certain counties just outside the region are much more heavily influenced by agriculture. For example, Colusa County's economy resembles North Dakota, although

Value of Production in the Sacramento Region, 1960-1998 Sacramento, Sutter, Yolo, and Yuba Counties



Source: County Agricultural Commissioner Reports, 1960-1998

rice, not wheat, is its leading crop. If some of these neighboring rural counties were included in our study, the results would be quite different.

The key crops produced and/or processed in the Sacramento region tend to be income-sensitive. They depend on expanding, high-income markets like Canada, the U.S. and Japan. Based on AIC research we now have better figures on California's total agricultural exports, but there is much variation among regions within California and we do not have specific figures for the Sacramento region. We do know that almonds and winegrapes, for example, are economically important exports from this six-county region and they include jobs in processing.

Agriculture's Contribution to the Local Economy

George Goldman

Cooperative Extension Specialist, Department of Agricultural and Resource Economics, UC Berkeley

Agriculture's economic impact in the Sacramento region depends substantially on processing of farm products, in contrast to some nearby counties where on-farm production values dominate.

The IMPLAN model's report of the six-county economy (see page 12) shows that by far the largest agricultural impact comes from fruits and vegetables, both fresh and processed. The number two category—grains, hay and their processed products—was less than half as large in 1998.

The model also indicates that income generated in 1998 by agriculture and related industries in the Sacramento region was slightly above 6% of the total regional income. That relatively small percentage results not from a decline in agricultural values but from the explosive growth of other segments of the Sacramento metropolitan area economy. The relative economic importance of agriculture will continue to decline as California and the Sacramento metro area grow in population. However, for some rural northern Sacramento Valley counties that are not growing very fast, agriculture is responsible for 50% to 60% of the total economy. For the state as a whole, the figure is 9.5% and declining.

Applications of Agricultural Technology

Michael P. Parrella

Associate Dean of Agricultural Sciences, College of Agricultural and Environmental Sciences, UC Davis

Advances in agricultural technology emphasized by the UCD College of Agricultural and Environmental Sciences include: (1) new cultivars, (2) sustainable production systems, (3) precision agriculture and sensor technology and (4) policy and decision-making.

New cultivars range from self-pollinating almonds (pomology) to a new dark red kidney bean with economic promise in crop rotations (agronomy) and chilling-tolerant tomatoes (vegetable crops). Research advances on sustainable production systems involve production in general, such as tuning vineyard management specifically to the Sacramento region, and also pest management techniques such as mechanical application of natural enemies and video spraying for weed control.

In precision technology, College of A&ES scientists are developing, for example, sensors to detect antibodies and progesterone in milk before the cow leaves the milking parlor, and pesticides on the skin of fruit in the packing shed. Our contributions on public policy issues include (1) brokering an agreement between regulatory agencies, the dairy industry and UC on dealing with pollution issues, (2) helping develop a national document to define pre-slaughter conditions for livestock and (3) leadership in the design of equipment to protect farm worker health.

Farmland Conversion Trends

Greg Poseley

Program Manager, Farmland Mapping and Monitoring Program, California Department of Conservation

The Farmland Mapping and Monitoring Program in California:

- Maintains a land-use inventory covering 48 counties and 44,000,000 acres.
- Provides land use conversion information for decision-makers to use in their planning for present and future agricultural land resources in the state.
- Publishes county maps at two-year intervals showing farmlands and land-use trends.

FMMP statistics on land-use and land-use trends in the six-county Sacramento region include location and acreage of lost farmland, and types of land converted.

In the Sierra foothill counties (El Dorado, Placer), most new urban development is coming on non-irrigated grain land, grazing land and other low-density rural acreage. In Yolo

County, in contrast, urban growth is taking place on some of California's best quality farmland around Woodland, Davis and West Sacramento. In Sutter County, the situation is similar. About half of the growth in Yuba County also is on high quality farmland. In Sacramento County most development is around the perimeter, with little loss of prime land. Since 1984, Sacramento County has lost 10,500 acres of farmland to development, about 5% of its total, with only a slight decrease in production values.

Panel GROWER PERSPECTIVES

Fruits and Nuts

Dave Scheuring

Yolo County walnut grower and former president of Yolo Land Trust

If you asked a realtor to find you some Class I farmland in the Sacramento Valley, you very likely would be told that there is none on the market. (Class I is the best row crop land.) Meanwhile farm prices are down and costs are up. With rents returning less than interest on passbook savings, why is the best farmland generally not for sale?

I believe that landowners, whether they are absentee landowners or owner-operators, recognize that prime farmland in the Central Valley is a unique agricultural resource and that its true worth exceeds its market value. There are only a few places on this earth that approximate the optimal combination of good soil, good water and a Mediterranean climate provided in the Central Valley, but even those few areas fail to measure up to this rich agricultural resource. I think most owners of

our best soils don't link their land with today's market values; they recognize an enduring value that surpasses present day demand for other uses.

You do indeed see "For Sale" signs as you drive through the Valley, but on closer examination you will find those properties encumbered in some way, such as poor soil or an expensive home. Such signs can be found on land offered at development prices, but finding good farmland is extremely difficult.

Yet many in the agricultural community despair of protecting these lands from the insistent demand for conversion to urban uses. Only a growing recognition of the unique character of the agricultural resources of this valley will lead to land use planning that protects these non-renewable resources.

One device that indirectly protects farmland is the recognition of the importance of preserving open space as a quality of life issue. For this to be an effective tool it must be embraced by landowners, many of whom now see the concept of open space as an imposition on their property rights. In this issue, urbanites and the agricultural community should be able to find common ground for protecting farmland.

Row Crops

Lynnel Pollock

Tomato grower and member of Yolo County Board of Supervisors

With no increase in overall domestic demand for tomato products, it's important to keep supply and demand in balance. The industry should be responsible. We need to increase demand for tomato products. UC should look

at health aspects of tomatoes, or at new technologies. We also need to investigate ways to increase export demand.

Agriculture in the Sacramento region has the ability to produce more row crops, but the outlook is not encouraging. Grain prices are low and sugar processing plants are being closed. With trees and vines, the farmer loses flexibility, since it takes years to bring them into production.

Meanwhile, the state's population is still growing and farmland and open space is still under pressure. County government in Yolo County has taken several steps to make sure that agriculture stays here. We have a strong general plan, and are now working on an agricultural element to that plan. We have a right-to-farm ordinance, and we are encouraging conservation easements. Yolo county has a one-to-one acreage mitigation requirement for conversion of agricultural land to another use.

However, there is need for greater subvention funds from the state, and we also need to get more land under the Williamson Act.

If our general plan encourages the agricultural sector, then we are well on the road. But agriculture will survive in Yolo County over the long run only if farming remains economically viable.

Rice

Charley Mathews

Yuba County rice grower

California is responsible for only a very small part of the world's rice production. Rice is produced here on Class III and Class IV soil, and there is no other agricultural use for some

of the poor soil where rice can grow. Rice land is worth from \$2,000 to \$3,000 per acre, including the value of the government price support program. (This state probably could still produce rice economically without the government program. Out of an average of \$6 billion in USDA payments to all agricultural producers, rice receives roughly 9%—with California getting one-fourth of that.)

Rice requires large investments in equipment. Production costs, including drying and storage, are about \$800/acre. The labor supply is relatively stable—workers go from rice to orchard crops and back. Duck hunting clubs add value to rice land where rice fields act as artificial wetlands and migrating waterfowl spend the winter in the fields.

When price and costs cannot be controlled, it is crucial to maintain high yields. California has the highest yields per acre in the world.

In past years when there was more burning of rice stubble, there was much more political pressure on rice growers. In the early 1990s, 400,000 to 500,000 acres were burned yearly; now it is down to less than 100,000 acres. On Yuba County's rice soils, there is little urban pressure or encroachment. In Sacramento County, North Natomas, the real target for growth, is the next battleground.

Cattle

Chuck Bacchi

El Dorado County rancher

In a recent book, Professor Steven Blank of UC Davis points out that technology has made it possible to produce, transport and store commodities far from the consumer, thus creating a global market. This in turn

has created price ceilings based on the lowest-cost producers, wherever they may be. And since we in the U.S. have some of the highest costs of production (land costs, water costs, wage rates, etc.), we will continue to lose market share. Since the returns on agricultural investments are lower, Professor Blank predicts that resources will shift out of agriculture and into more profitable alternatives.

My wife has been saying similar things for years as our income level has stagnated and we've watched our costs skyrocket. When you add governmental policies and non-governmental organization actions that create further uncertainty, it would be safe to characterize the livestock industry as in a high state of anxiety.

In California:

- 3% of the total cattle in the state are on 15,400 ranches with from 1 to 49 head.
- 16% are on 3,400 ranches with 100 to 499 head.
- 17% are on 1,100 ranches with 500 to 999 head.
- 61% are on 1,200 ranches with 1,000 head and more.

The ranches in the last three categories are in peril, since they are large enough that ranching must be a full time job. And of these, the smaller ones—generally cow/calf operators—are at most risk, since it is more difficult for them to generate enough income to make a living. They are usually sole proprietors or family partnerships. We need to ask: What will it take to keep these families in business?

Land trusts and conservation easements are seen by many as the way to address the needs of both the rancher and the public. But finding

the money to buy up enough easements to make a difference is difficult, and the process is slow. In the six-county Sacramento region, 719,000 acres are identified as grazing land. If you include “prime farmland” and “other important farmland,” the total jumps to over 2 million acres. For those who are interested in protecting agricultural lands, this is a daunting figure. Even if only 10% of this land is at risk and important for open space preservation, that's still over 200,000 acres. We need to consider another mechanism, one that can leverage scarce funding to protect more acres of grazing land—and do it quickly by developing a program that excites the agricultural community.

We could learn from the federal Wetlands Reserve Program, which is designed to encourage the conversion of marginal farmland into wetlands. This program offers a choice of easements to the farmer: 10 years, 30 years and in perpetuity. By the end of last year, over 3,700 landowners in 47 states had put more than 650,000 acres into these different easements.

Combining this idea of leased easements with the idea of yearly lease payments (instead of a one-time-one-lump payment) would create a set of powerful incentives for landowners to participate. Many people in agriculture have held their land for generations and continue to think in generational terms. For those of us with this long-term view, a one-time payment for a conservation easement is inadequate because it helps only one generation. The desire to pass on the land and business is a powerful motivation for us.

A program that leases long-term easements and makes yearly payments could work to protect rangeland. For example, if rangeland

easements could be purchased for \$1,000 per acre, \$1 million would preserve 1,000 acres. But if the conservation easement was for some long period of time (say, 30 years) and if annual payments were made to the rangeland owner (say, \$20 per acre) then that same \$1 million invested at 6% would bring \$60,000 per year—which would pay for the easement on 3,000 acres. This would be a powerful incentive to enter the program.

Meanwhile, the average age of those of us in agriculture continues to increase, and the need for decisions on the future of the property we hold becomes more and more pressing.

CONCLUDING INTERPRETATIONS

John Hopkins

Green Valley Initiative, Institute for Ecological Health

California is the most urban state in the nation, and the only one where surveys show that there is substantial support for farmland preservation among urban people. (The Los Angeles area and the Santa Clara Valley are seen by Californians as models of what to avoid.) High-technology industries in the Sacramento region tell us that agriculture is important to them because it enhances quality of urban life and attracts the best job applicants. However, there is little understanding of the needs of farmers and ranchers.

Among farmers and ranchers, the phrase “open space” creates some confusion about public access. To others, open space denotes land protected from development, and does not imply any public access. We need to find a way to reimburse landowners for the

environmental quality that they provide—water, wildlife, etc. This won’t be easy.

Projected population increases in the Sacramento region are frightening and it is crucial to find ways to preserve farm and ranch land. To do this, we must make it possible for farmers to stay in business. The Green Valley Initiative has the capability to build support at the regional level among businesses, farmers and ranchers, and agencies.

Al Medvitz

Solano County sheep and dryland farmer, California Farm Bureau Federation district director

The concept of open space involves private property issues, such as vandalism and protection from liability. Associated with that is the market concept—the land is owned to produce income.

One way to deal with both public and private interests is to reframe agriculture as another form of environmental management. If environmental outcomes are viewed as commodities, we could find a way to attach a public value, and buy those outcomes. This would allow farmers to contribute permanent or semi-permanent open space.

International markets are having a profound effect locally, but in some cases—with unique commodities—we could affect global markets by acting locally. To do this, we need to strengthen interactions between agriculture and local city and county governments, as sheepmen have done with Solano County supervisors. We need to think about these linkages, and ways of interacting to make sure our commodities are taken into account in decisions made in Seattle or Zurich.

Meanwhile, we need to explore the impact of concentration in the marketing system. Supermarkets now have a global production supply and the squeeze on local producers is getting worse.

AUDIENCE DISCUSSION

Question: What's the greatest threat to survival of agriculture in the six-county region?

Poseley: Development of agricultural land. Changes to higher-value crops have offset some of this trend, but not all.

Goldman: Population growth and the current understanding of property rights.

Parella: Lack of public awareness of the real role of agriculture. Agriculture is viewed as a polluter, rather than as a sustainer of the environment.

Sumner: During the last decade, according to the state's FMMP data, only about 1% of Yolo County land has been converted. At that rate, the loss in a century would be 10%. The economic impact would be much greater if, for example, irrigation water were restricted or farm wages were doubled.

Question: How can we keep farm families farming? What (besides higher prices) is needed to keep Sacramento region farmers in business?

Klonsky: A crucial factor is the value of land. Lifestyle farms will hold some land in

agriculture, but a more important issue is how to keep young people coming into commercial farming. Also, pesticide regulation under the Food Quality Protection Act will have an effect.

Pollock: Keep farmland prices at a level that allows farm production. There are too many options to shift from agriculture to other rural uses—lifestyle uses rather than actual farm production. I think this will have to be done by regulating uses of land.

Sumner: If pressure for urban conversion exists, the natural time to convert is when the farmer retires or dies. This event may bring about the conversion, but it is not the reason for the pressure to convert.

Scheuring: If we are to remain competitive in export markets, we need input from the University. UC Cooperative Extension, the University's link to agriculture, is a great asset but has been eroded by a reduction in numbers of farm advisors and specialists. Research funding is being shifted into industry, and this has advantages but also disadvantages.

Mathews: It's crucial to maintain demand. Exports may not dominate our marketing, but they are needed to take care of excess production.

Bacchi: The bottom line is income, but family partnerships are important. I have 22 family members on the ranch, including nieces and nephews, and in the long term I would like to see the next generation make a living there.

Audience Comment: It's too late for this year's federal farm bill, but the next one in 2006 should recognize agriculture's contribu-

tions to the environment—sequestering of carbon, for example. The idea would be to reward farmers for environmental stewardship and husbanding of resources. (The average farm subsidy in the U.S. is \$26/acre, in Europe \$300/acre, and in Japan \$4,900/acre.)

Question: Making annual conservation easement payments over generations is an intriguing idea. What are the pros and cons?

Mathews: If you are trying to protect the land in perpetuity, a one-time payment might be required. But if the goal is to enhance the land's value for agriculture, then annual payments are more appropriate. It's somewhat similar to the Williamson Act, which also has an effect on income over years and generations.

Bacchi: On the east side of the Sacramento Valley, the problem is grazing land. It is low value agricultural acreage with high speculative value. There is danger of a tremendous loss of this cheap land very quickly. Now is the opportunity to create a plan to protect it.

Audience Comment:

A program that fits into the annual income process is the single most viable opportunity to preserve open space in the Sacramento region.

Speaker Biographies

Chuck Bacchi resides in El Dorado County near Coloma. He is a 4th generation cattle rancher and partner in Bacchi Ranch, a cow-calf operation. The ranch summers cattle at Fort Klamath, Oregon and in the Sierra Nevada mountains near French Meadows Reservoir in Placer County. His ranch depends on leased grazing lands in El Dorado, Sacramento, Placer, Yuba, and Nevada counties. Bacchi is a Director of Western Sierra National Bank, State Director of the California Cattlemen's Association, and Vice President of the Amador, El Dorado, and Sacramento Cattlemen's Association. He is Co-chair of the Green Valley Initiative and a member of Valley Vision.

Mike Campbell is the Assistant Dean for College Relations in the College of Agricultural and Environmental Sciences at UC Davis. In this position he serves as the liaison between the college and agricultural, environmental, and consumer interests. He has farmed in Sacramento and Yolo counties and has been active in farmland issues in Yolo County and his hometown of Clarksburg. He is an active participant in the Green Valley Initiative. Campbell has a BS in Agricultural Business Management from UC Davis and an MS in Management from Stanford University.

Gail Ervin is a private consultant specializing in environmental planning, facilitation, and public dispute resolution. She is Co-chair and Facilitator of the Green Valley Initiative, a collaborative effort to preserve agriculture and open space in the Sacramento region. She has an MA in Environmental Planning from California State University, Sacramento, and a BA in Social Ecology from UC Irvine. As a Senior Associate with the California Center for Public Dispute Resolution, she has provided mediation and facilitation for complex public policy projects such as the California Governance Consensus Project and the CALFED Bay Delta Program.

George E. Goldman is an economist for Cooperative Extension at the University of California, Berkeley. He has been with the University for 40 years working on California's natural resources and rural areas being affected by local, regional, statewide and national resource policies, and legislation. His major area is regional economics and he has worked extensively with counties and cities throughout the state on agricultural economics related studies, impact assessments to local governments and projects with the private sector. He uses the IMPLAN system for creating regional input-output models.

John Hopkins is President of the Institute for Ecological Health, a non-profit sustainable land use organization based in Davis. Locally he plays a leadership role in the Green Valley Initiative and is Vice Chair of the South Sacramento County Habitat Conservation Plan Steering Committee. He is a former UC Davis faculty member.

Karen Klonsky has been an Extension Specialist in the Department of Agricultural and Resource Economics at UC Davis since 1981. She received a PhD from Michigan State University. Her primary area of research is the feasibility of alternative and organic farming systems. Klonsky directs the program that produces cost and returns estimates for farm commodities produced in California.

James D. MacDonald is Executive Associate Dean of the UC Davis College of Agricultural and Environmental Sciences and Professor of Plant Pathology. As former chair of the Department of Plant Pathology, he led last year's wholesale revision of the College's academic plan which addresses research, teaching, and outreach priorities. MacDonald's research focuses on root diseases, soil microbiology, diseases of ornamentals, and environmental stress in plant disease. He has been a member the UC Davis faculty since 1978 and has a PhD from this campus.

Charley Mathews has been a rice farmer for 10 years, operating 5,000 acres of rice land in Yuba and Placer counties with his family. He has a BS in Mechanical Engineering from California Polytechnic State University, San Luis Obispo and is active in the Rice Commission, USA Rice Council, the Yuba-Sutter Farm Bureau, and the Yuba-Sutter Fair.

Al Medvitz and his wife Jeannie McCormack produce lambs, small grains, safflower, and alfalfa on 4,000 acres of land in the Montezuma Hills of Solano County (west of the Delta near Rio Vista). He has written on population growth and land use in California, the land application of sewage sludge, the effects of concentrated processing systems on lamb markets, and the relationship of animal agriculture to grazing lands in California. He is a coeditor of *California Farmland under Urban Pressure: Statewide and Regional Perspectives*, published in 1999 by the UC Agricultural Issues Center. Medvitz is a member of the Board of Directors of the California Farm Bureau Federation, Chairman of the Development Board of the Department of Animal Science at UC Davis, and active in the American Association for the Advancement of Science.

Michael P. Parrella is Associate Dean for Agricultural Sciences in the UC Davis College of Agricultural and Environmental Sciences. He is Professor of Entomology and former Chair of the Department of Entomology. His research concentrates on integrated pest management strategies for ornamentals grown in glasshouses with an emphasis on biological control. A member of the UC Davis faculty since 1988 and a former faculty member at UC Riverside, Parrella has a PhD from Virginia Polytechnic Institute and State University.

Lynnel Pollock a member of the Yolo County Board of Supervisors, operates with her husband a farm that produces tomatoes, grains, walnuts, and seed crops. As Supervisor, she represents Yolo's District 5—the largely rural northern and western areas of the county. She has been President of the Yolo County Farm Bureau, state Chair of the California Farm

Bureau Women's Committee, and a member of the State Industrial Welfare Commission. She has a BA in Biology from Stanford University.

Greg Poseley is Manager of the Department of Conservation's Farmland Mapping and Monitoring Program. He oversees the preparation of farmland maps and land use conversion statistics for 48 California counties, produced biennially by the Department. Before joining the Department of Conservation in 1982, he worked for the Department of Water Resources conducting studies related to agricultural irrigation efficiencies and urban water conservation. Poseley serves as a member of the Biodiversity Council's Science Coordinating Committee and on the California Water Use Coordinating Committee. He holds an MS in Biogeography from California State University, Northridge. To learn more about the Department of Conservation and the Farmland Mapping and Monitoring Program, visit the web site at: www.consrv.ca.gov/dlrp/fmmp

David Scheuring grows walnuts on more than 300 acres in the Capay Valley and Esparto area of Yolo County. He is a founding member and former president of the Yolo Land Trust. He has also farmed in northern Illinois, growing corn, soybeans, cucumbers, asparagus, and produce for the fresh market. Scheuring has a PhD in Soil Chemistry from UC Berkeley.

Al Sokolow is Public Policy Specialist, UC Cooperative Extension, Associate Director for rural-urban issues of the Agricultural Issues Center, and Associate Chair of the Department of Human and Community Development, UC Davis. He works on issues and processes of community governance,

state-local relations, public finance, and California politics. Much of his current research and extension activities concern farmland and land use policy in California. Before transferring to his current position in 1992, Sokolow was a Professor of Political Science at UC Davis for 27 years. He is a native of Chicago and has degrees from the University of Illinois.

Daniel A. Sumner is the Frank H. Buck Jr., Professor in the Department of Agricultural and Resource Economics, UC Davis and Director of the UC Agricultural Issues Center. His research and teaching focus on the consequences of policy on agriculture and the economy. Before arriving in Davis in 1993, Sumner was the Assistant Secretary for Economics at the United States Department of Agriculture where he participated in policy formation and analysis on all topics facing agriculture and rural America. A member of a farm family in Solano County, Sumner has a BS in Agricultural Management from California Polytechnic State University, San Luis Obispo and a PhD in Economics from the University of Chicago.

Appendix: FMMP Land Use Definitions

New Urban and Built-up Land Since 1984

Base year for Sacramento, Sutter and Yuba counties is 1988. Conversions to urban and built-up land are from prime farmland, farmland of statewide importance, unique farmland, farmland of local importance, grazing land and other land.

Prime Farmland

Land with the best combination of physical and chemical characteristics able to sustain long term production of agricultural crops. This land must have been used for production of irrigated crops at some time during the four years prior to the mapping date.

Farmland of Statewide Importance

Land of agricultural importance to the local economy, as defined by each county's local advisory committee and adopted by its board of supervisors.

Unique Farmland

Land used for production of the state's major crops on soils not qualifying for prime or statewide importance. This land is usually irrigated, but may include nonirrigated fruits and vegetables as found in some climatic zones in California.

Farmland of Local Importance

Land of agricultural importance to the local economy, as defined by each county's local advisory committee and adopted by its board of supervisors.

Grazing Land

Land on which the existing vegetation is suitable for grazing of livestock. The minimum mapping unit for this category is 40 acres.

Urban and Built-up Land

Residential land with a density of at least six units per ten-acre parcel, as well as land used for industrial and commercial purposes, golf courses, landfills, airports, sewage treatment, and other water control structures.

Other Land

Land which does not meet the criteria of any other category. Common examples include low density rural developments, wetlands, dense brush and timberlands, gravel pits, and small water bodies.

Water

Perennial water bodies with an extent of at least 40 acres.