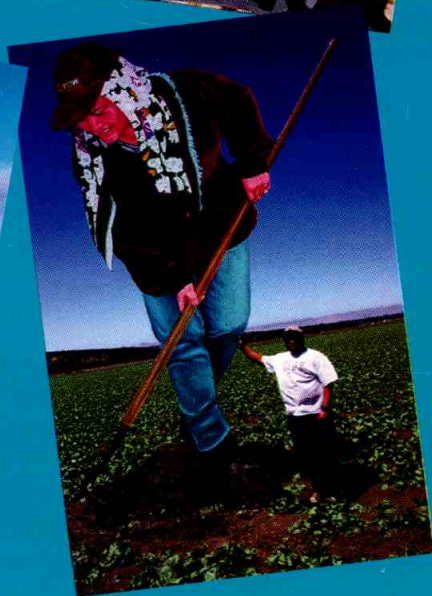
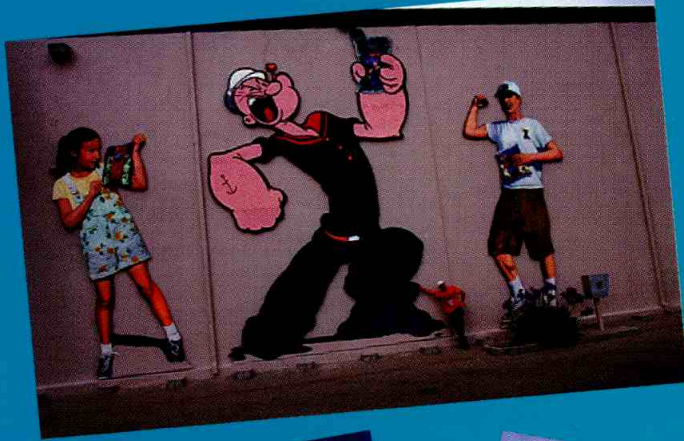


MONTEREY COUNTY

AGRICULTURAL COMMISSIONER'S CROP REPORT



1999

John Cerney Murals

Have you ever wondered who the artists are behind the bigger than life art work throughout the county? The suspense is over...it is local artist...John Cerney, who is occasionally assisted by another artist, Dong Sun Kim.

You may have worked with John, as he's previously worked here in Monterey County for local produce companies. He worked as a loader for Admiral Packing and Bruce Church prior to leaving the area to attend Long Beach State where he majored and graduated in commercial art. Upon his return to Salinas he took a job as a loader...hey, it paid the bills. His first opportunity to practice his craft as an artist was the truck and produce stand at Hitchcock Road and Highway 68. Since that project, John has sprouted many giant figures throughout the county, from thirty-foot field workers on various ranches, to well known locals such as the art figure of Dennis Caprarra and his dog off Highway 101 in Gonzales. If you have not been down Abbott Street in Salinas you may want to check out his most recent project, a mural for River Ranch Fresh Foods that encompasses the entire front of the building.

John's talent is evident and his giants will definitely not go unnoticed. Question is...where will one pop up next?

Our many thanks to the following companies for allowing the usage of John's larger than life art for this years cover of the crop report:

Fresh Express Inc.

River Ranch Fresh Foods

Dennis Caprarra

Crown Packing

Mills, Inc.

MONTEREY COUNTY

AGRICULTURAL COMMISSIONER

1428 ABBOTT STREET - SALINAS, CALIFORNIA 93901
PHONE: (831) 759-7325 FAX: (831) 422-5003

ERIC LAURITZEN

AGRICULTURAL COMMISSIONER



William (Bill) J. Lyons Jr., Secretary -- California Department of Food & Agriculture
and

The Honorable Board of Supervisors of Monterey County

Louis Calcagno	3 rd District – Chair, Board of Supervisors		
Simon Salinas	1 st District	Edith Johnsen	4 th District
Judy Pennycook	2 nd District	Dave Potter	5 th District

It is a pleasure to present the 1999 annual Monterey County Crop Report. This report, produced pursuant to the provisions of Section 2279 of the California Food & Agriculture Code, reflects a record production value of nearly \$2.5 billion. The total value of Monterey County agriculture increased 6.5% over 1998 production value. This increase was attained despite lower unit prices for some of our core crops, such as head lettuce, broccoli and wine grapes. While the agricultural industry continues to demonstrate its adaptability, innovation and diversity by effectively responding to ever-changing pressures, 1999 was a very tough year for many vegetable growers. It is important to note that the figures contained herein are gross values and do not represent net profit or losses experienced by individual growers.

The largest value increase in a single commodity in 1999 was leaf lettuce, an increase of \$59 million, which is consistent with the trend toward value added products. Increased diversification and specialization contributed to an expansion of nursery products by 17%, although some traditional nursery crops such as roses and carnations continue to decline. Our grain crop was down due to unseasonably late rains that delayed planting, forcing our growers into direct competition with other production areas in the United States. Seed crops posted a 38% reduction in total value over 1998, typical of the cyclical nature of seed production. Livestock continued a slight gain and dairy values are consistent with prior years.

Vegetable crops as a category posted a 6.4% gain, although significant declines were noted in head lettuce, tomatoes and chili peppers. These gains were offset by increases in leaf lettuce, miscellaneous vegetables, spring mix, salad products, asparagus, squash and bell peppers. Spring mix, which was first listed as an individual commodity in 1997, increased 41%. Wine grape production decreased 12% from 1998, largely because of unfavorable weather conditions. Although strawberry production declined 20%, the value showed a 10% increase due to a strong market.

Monterey County continues to be a leader in exports with nearly three-quarters of a billion pounds of produce shipped to more than 60 countries in 1999. The diversity and dynamics of the world market causes yearly fluctuations in exports, yet our agricultural industry continues to show its ability to be a major player in the worldwide marketplace.

Although some segments of the industry struggled in 1999, the production of this report is a reminder of the significance of agriculture to our economy and community. Recognition for the compilation of this report goes to Gerry Willey, Deputy Agricultural Commissioner, and the many staff who assisted in gathering the information. I would also like to thank the agricultural industry and others who helped provide assistance and information to complete the report. Without a very collaborative effort, this report would not be possible.

Sincerely,

Eric Lauritzen
Agricultural Commissioner

TABLE OF CONTENTS

STAFF LIST	PAGE 3
APPROXIMATE WEIGHTS USED FOR FRESH MARKET CONVERSION.....	PAGE 4
FRUITS AND NUTS.....	PAGE 5
GRAPE SUPPLEMENTARY	PAGE 6
VEGETABLE CROPS	PAGE 7-13
FIELD CROPS	PAGE 14
NURSERY.....	PAGE 15-16
SEED AND APIARY	PAGE 17
LIVESTOCK AND DAIRYING.....	PAGE 18
POULTRY.....	PAGE 19
TREND OF MAJOR CROPS.....	PAGE 20
MILLION DOLLAR CROPS.....	PAGE 21
SUMMARY.....	PAGE 22
EXPORT SUMMARIES	PAGE 23-24
SUSTAINABLE AGRICULTURAL ACTIVITIES	PAGE 25
ORGANIC AGRICULTURE IN MONTEREY COUNTY.....	PAGE 26
ARTICLES OF INTEREST	PAGE 27-32

LAYOUT: COOPERATIVE EFFORT OF THE AGRICULTURAL COMMISSIONER'S STAFF

SPECIAL THANKS TO THOSE WHO PROVIDED INFORMATION FOR THIS YEAR'S CROP STATISTICS. WITHOUT YOUR COOPERATION, COMPILING ACCURATE DATA WOULD NOT HAVE BEEN POSSIBLE.

(F.O.B. values in this report include packing, harvesting, cooling, icing, pallets, and any local charges)

AGRICULTURAL COMMISSIONER'S OFFICE

AGRICULTURAL COMMISSIONER

Eric Lauritzen

CHIEF DEPUTY AGRICULTURAL COMMISSIONER

Katherine Smith-Borchard Robert Roach

DIRECTOR OF WEIGHTS & MEASURES

Robert Keadle

DEPUTY AGRICULTURAL COMMISSIONER

Ken Corbishley William Waddle Gerry Willey

ADMINISTRATIVE SECRETARY

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Rosanne Rubino

INFORMATION SYSTEM COORDINATOR

Emmett Ashurst

STAFF BIOLOGIST

Brad Oliver

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Cherub Hill Expedito Ibarbia Paul Josselyn Patty Murray Steve Olmsted Richard Ordenez
Victor Pongo Daniel Prakash Higinio Ramirez Jesus Ramirez Maria Vidauri

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Margot Baldivez Christen Cathcart Matt Deen Levi Hoagland Chris Miller Sylvia Rodriguez Sompura Sadasivaiah

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Jane Wiggs-Grubb Senior Typist Clerk Noel Roberts Data Entry Operator II Pam Cope Account Clerk
Stacey Hendrix Senior Typist Clerk Ruby Sease Data Entry Operator II Jessica Saul Account Clerk

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Danny Mallobox, III Doug McGinn Joe Pacheco Marty Schwarm Lori Silvas Tom Spradling
Juli Sumter Ron Thomas Daniel Torres Joe Torres Rex Tucker Parker Watwood

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AGRICULTURAL INSPECTOR/BIOLOGISTS

Lawrence Mora William Taylor

PAJARO BRANCH OFFICE

DEPUTY AGRICULTURAL COMMISSIONER

Charles Nuñez

ADMINISTRATIVE SUPPORT

Pat Bissett Senior Typist Clerk

AGRICULTURAL INSPECTOR/BIOLOGISTS

Johnny Bunch, Jr. David Murphy

MONTEREY BRANCH OFFICE

AGRICULTURAL INSPECTOR/BIOLOGIST

Assigned on rotating basis

WEIGHTS AND MEASURES DIVISION

WEIGHTS & MEASURES INSPECTORS

James Abercrombie Addison Church Carol Montgomery

APPROXIMATE WEIGHTS USED FOR FRESH MARKET CONVERSION

UNIT/CROP	POUNDS PER CARTON
ANISE	37
APPLES	38
ARTICHOKES	23
ASPARAGUS	25
AVOCADOS	26
BOK CHOY	50
BROCCOLI	23
BRUSSELS SPROUTS	25
BUSHBERRIES	9
CABBAGE, All	50
CACTUS PEARS	23
CARROTS	50
CAULIFLOWER	23
CELERY	60
ENDIVE	25
ESCAROLE	25
KALE	20
KIWI FRUIT	7
LETTUCE, Head	50
LETTUCE, Leaf	25
NAPA	50
ONIONS, Dry	50
ONIONS, Green	13
PARSLEY	21
PEPPERS, Bell	30
RADICCHIO	9
RADISHES	12
RAPPINI	23
RASPBERRIES	6
ROMAINE	37
SALAD PRODUCTS	20
SNOW PEAS	12
SPINACH	20
SQUASH	30
STRAWBERRIES	12
TOMATOES	25
TOMATOES, Cherry	12

FRUITS AND NUTS

CROP	YEAR	PRODUCTION			F. O. B. VALUE		
		ACREAGE	PER ACRE	TOTAL	UNIT	PER UNIT	TOTAL
APPLES	1999	172.00	18.10	3,113	TON	\$154.51	\$481,000
TOTAL	1998	267.00	14.23	3,800	"	199.47	758,000
Fresh	1999			1,172	"	104.10	122,000
	1998			475	"	200.00	95,000
Processing	1999			1,941	"	184.96	359,000
	1998			3,325	"	199.40	663,000
AVOCADOS*	1999	104.00	.92	96	"	760.42	73,000
	1998	92.00	5.62	517	"	3,193.42	1,651,000
BUSHBERRIES	1999	23.50	4.13	97	"	4,298.97	417,000
	1998**	20.50	5.27	108	"	1,444.44	156,000
CITRUS	1999	925.00	7.07	6,535	"	223.41	1,460,000
	1998	1,094.40	12.08	13,217	"	250.96	3,317,000
GRAPES***	1999	34,187.00	3.49	119,143	"	1,325.52	157,926,000
	1998	32,131.00	4.63	148,860	"	1,199.85	178,610,000
KIWI FRUIT	1999	5.00	5.40	27	"	814.82	22,000
	1998	8.10	3.09	25	"	2,000.00	50,000
RASPBERRIES	1999	41.00	3.42	140	"	3,107.14	435,000
	1998	90.00	3.79	341	"	4,002.93	1,365,000
STRAWBERRIES	1999	6,864.00	22.46	154,180	"	1,411.34	217,600,000
TOTAL	1998	6,540.00	29.40	192,300	"	1,031.80	198,415,000
Fresh	1999			124,752	"	1,628.60	203,171,000
	1998			172,650	"	1,089.71	188,139,000
Processing	1999			29,427	"	490.33	14,429,000
	1998			19,650	"	522.95	10,276,000
WALNUTS	1999	450.00	.57	255	"	894.12	228,000
	1998	376.00	1.19	449	"	1,077.95	484,000
MISCELLANEOUS	1999			38	"	631.58	24,000
TOTAL****	1998			332	"	771.08	256,000
FRUITS AND NUTS	1999	42,771.75		FRUITS AND NUTS			\$378,666,000
TOTAL ACRES	1998	48,319.00		TOTAL VALUE			\$385,062,000

*Totals include producing & non-producing new plantings. **Corrected figures. *** Only represents bearing acres.

****Includes Processed Raspberries & Bushberries.

GRAPE SUPPLEMENTARY

CROP	YEAR	PRODUCTION			F. O. B. VALUE		
		ACREAGE	PER ACRE	TOTAL	UNIT	PER UNIT	TOTAL
GRAPES	TOTAL	41,415					
Bearing	1999	34,187	3.49	119,143.00	TON	\$1,325.52	\$157,926,000
Nonbearing or not harvested		7,228					
GRAPES	TOTAL	39,901					
Bearing	1998	32,131	4.63	148,860.00	TON	\$1,199.85	\$178,610,000
Nonbearing or not harvested		7,770					

TOTAL ACREAGE OF WINE GRAPES BY VARIETY

VARIETY	HARVESTED ACRES	AVERAGE PRICE PER TON	TOTAL TONS	NON-BEARING ACRES***
<i>Cabernet Franc</i>	175.41	1,146.55	585.36	47.74
<i>Cabernet Sauvignon</i>	4,148.40	1,312.95	15,183.86	1,322.01
<i>Chardonnay</i>	16,178.94	1,497.81	55,939.84	2,160.40
<i>Chenin blanc</i>	1,096.52	729.68	3,863.28	97.78
<i>Gamay (Napa)</i>	129.50	831.39	697.16	-
<i>Gamay Beaujolais</i>	292.46	1,280.46	1,069.40	-
<i>Gewurztraminer</i>	584.37	849.61	1,366.22	62.00
<i>Grenache</i>	155.23	1,170.94	792.58	40.98
<i>Malbec</i>	18.00	1,323.43	52.23	21.20
<i>Merlot</i>	3,730.50	1,310.66	14,162.74	951.09
<i>Muscat blanc/M. Cannelli</i>	77.51	997.14	228.51	23.68
<i>Muscat Orange</i>	29.05	1,486.55	118.01	7.00
<i>Petit Sirah</i>	313.52	896.13	1,072.61	15.00
<i>Pinot blanc</i>	566.22	1,093.81	1,590.00	-
<i>Pinot gris</i>	233.72	1,393.83	531.33	-
<i>Pinot noir</i>	1,939.35	1,618.96	5,229.25	619.43
<i>Sangiovese</i>	213.53	1,198.05	921.10	12.34
<i>Sauvignon blanc</i>	1,041.84	991.25	3,883.98	263.11
<i>Semillon</i>	141.35	702.59	430.92	-
<i>Syrah</i>	324.13	1,327.80	1,171.64	274.90
<i>Viognier</i>	58.22	2,381.66	129.79	4.20
<i>White Riesling</i>	1,247.51	840.94	6,592.81	51.20
<i>Zinfandel</i>	999.00	820.56	2,089.85	256.63
<i>Other Red*</i>	141.07	1,401.61	271.66	951.33
<i>Other White**</i>	351.90	808.78	1,168.70	45.64

*Alicante Bouschet, Barbera, Charbono, Cinsault, Dolcetto, Freisa, LaGrein, Malbec, Mourvedre, Nebbiolo, Petit Verdot, Refosco, Souzao, Valdiguie.

**French Colombard, Inzolia, Malvasia bianca, Marsanne, Rousanne, Sauvignon musque, Sylvaner.

***Non-bearing and newly planted acres.

VEGETABLE CROPS

CROP	YEAR	PRODUCTION			F. O. B. VALUE		
		ACREAGE	PER ACRE	TOTAL	UNIT	PER UNIT	TOTAL
ANISE	1999	1,034	13.83	14,300	TON	\$392.59	\$5,614,000
	1998	492	12.19	5,999	"	540.59	3,243,000
ARTICHOKES	1999	6,720	8.06	54,150	"	794.35	43,014,000
	TOTAL	1998	6,451	6.68	43,115	"	899.94
Fresh	1999			42,878	"	927.07	39,751,000
	1998			27,700	"	1,216.10	33,686,000
Processing (Regular)	1999			8,772	"	365.25	3,204,000
	1998			12,915	"	391.17	5,052,000
Processing (Culls)	1999			2,500	"	23.60	59,000
	1998			2,500	"	25.20	63,000
ASPARAGUS	1999	4,936	2.57	12,700	"	1,640.00	20,828,000
	1998	3,412	2.25	7,670	"	1,681.88	12,900,000
BOK CHOY	1999	595	20.17	12,000	"	274.42	3,293,000
	1998	640	16.82	10,764	"	299.61	3,225,000
BROCCOLI	1999	53,880	7.32	394,400	"	612.46	241,554,000
	TOTAL	1998	53,953	6.69	360,700	"	683.02
Fresh	1999			310,300	"	535.91	166,293,000
	1998			285,000	"	642.37	183,075,000
Food Service	1999			59,700	"	1,106.35	66,049,000
	1998			51,400	"	1,051.13	54,028,000
Processing	1999			24,400	"	377.54	9,212,000
	1998			24,300	"	381.11	9,261,000
CARROTS	1999	3,559	21.83	77,700	"	164.40	12,774,000
	TOTAL	1998	3,285	21.12	69,400	"	179.27
Fresh	1999			33,800	"	178.37	6,029,000
	1998			40,200	"	181.32	7,289,000
Food Service	1999			1,200	"	1,278.33	1,534,000
	1998			742	"	1,359.84	1,009,000
Processing	1999			42,700	"	122.04	5,211,000
	1998			28,458	"	145.58	4,143,000

VEGETABLE CROPS - Continued

CROP	YEAR	PRODUCTION			F. O. B. VALUE		
		ACREAGE	PER ACRE	TOTAL	UNIT	PER UNIT	TOTAL
CABBAGE, All	1999	1,558	15.28	23,800	TON	\$235.92	\$5,615,000
	1998	1,873	17.94	33,600	"	240.51	8,081,000
CAULIFLOWER TOTAL	1999	17,538	8.53	149,600	"	701.97	105,015,000
	1998	18,701	8.40	157,000	"	666.48	104,637,000
Fresh*	1999			132,000	"	619.70	81,801,000
	1998			144,000	"	613.17	88,296,000
Food Service	1999			7,200	"	2,416.81	17,401,000
	1998			5,580	"	2,244.98	12,527,000
Processing	1999			10,400	"	558.94	5,813,000
	1998			7,420	"	514.02	3,814,000
CELERY TOTAL	1999	9,655	34.80	336,000	"	259.32	87,132,000
	1998	8,720	34.40	300,000	"	260.27	78,082,000
Fresh	1999			318,000	"	247.45	78,689,000
	1998			288,000	"	251.28	72,369,000
Food Service	1999			7,800	"	885.13	6,904,000
	1998			5,230	"	894.26	4,677,000
Processing	1999			10,200	"	150.88	1,539,000
	1998			6,770	"	153.03	1,036,000
CHARD	1999	641	6.55	4,200	"	493.57	2,073,000
	1998	561	6.60	3,700	"	498.38	1,844,000
CILANTRO	1999	837	10.39	8,700	"	511.03	4,446,000
	1998	665	9.68	6,440	"	517.08	3,330,000
GARLIC TOTAL	1999	988	7.29	7,200	"	472.36	3,401,000
	1998	1,104	8.35	9,220	"	477.77	4,405,000
Fresh	1999			2,400	"	525.83	1,262,000
	1998			7,700	"	526.62	4,055,000
Processing	1999			4,800	"	445.63	2,139,000
	1998			1,520	"	230.26	350,000
HERBS**	1999	75	3,345.33	250,900	BUNCH	4.70	1,180,000
	1998	69	3,492.75	241,000	"	4.77	1,150,000

*Figures combined white & green cauliflower.

**Includes: Chervil, Dill, Ginkgo, Marjoram, Oregano, Rosemary, Sage, Thyme, misc.

VEGETABLE CROPS - Continued

CROP	YEAR	PRODUCTION			F. O. B. VALUE		
		ACREAGE	PER ACRE	TOTAL	UNIT	PER UNIT	TOTAL
KALE	1999	1,236	8.27	10,220	TON	\$710.18	\$7,258,000
TOTAL	1998	950	9.00	8,550	"	742.22	6,346,000
Fresh All	1999			9,660	"	665.01	6,424,000
	1998			8,030	"	692.40	5,560,000
Food Service	1999			560	"	1,489.29	834,000
	1998			520	"	1,511.54	786,000
LEEKs	1999	264	11.14	2,940	"	646.94	1,902,000
	1998	216	11.76	2,540	"	670.87	1,704,000
LETTUCE All (see page 12 & 13)	1999	102,584			CTN		584,303,000
	1998	90,573			"		569,268,000
MISC. VEGETABLES	1999	12,415	8.24	102,300	TON	762.95	78,050,000
TOTAL	1998	7,194	7.50	53,930	"	758.63	40,913,000
Fresh*	1999			37,000	"	482.14	17,839,000
	1998			20,870	"	593.72	12,391,000
Food Service**	1999			61,880	"	935.88	57,912,000
	1998			28,860	"	894.04	25,802,000
Processing***	1999			3,420	"	672.22	2,299,000
	1998			4,200	"	647.62	2,720,000
MUSHROOMS	1999			47,584,000	LBS	1.29	61,400,000
	1998			47,032,000	"	1.19	55,968,000
NAPA	1999	803	22.91	18,400	"	294.24	5,414,000
	1998	858	20.98	18,000	"	293.28	5,279,000
ONIONS, Green	1999	1,718	12.28	21,100	"	976.30	20,600,000
	1998	1,570	11.40	17,900	"	1,028.32	18,407,000
ONIONS, Dry	1999	992	21.47	21,300	TON	156.06	\$3,324,000
TOTAL	1998	1,104	22.26	24,570	"	150.43	3,696,000
Fresh	1999			5,600	"	317.68	1,779,000
	1998			6,784	"	328.42	2,228,000
Processing	1999			15,700	"	98.41	1,545,000
	1998			17,786	"	82.54	1,468,000

*Includes: Beans, Beets, Brussel Sprouts, Cactus Pears, Cardone, Chives, Corn, Cucumbers, Daikon, Edible Flowers, Fava Beans, Gourds, Kohlrabi, Assorted Melons, Parsnips, Pimentos, Pumpkins, Turnips. **Includes: Radish, Mixed Vegetables, Onions. ***Includes: Asparagus, Brussel, Sprouts, Mushrooms.

VEGETABLE CROPS - Continued

CROP	YEAR	PRODUCTION			F. O. B. VALUE		
		ACREAGE	PER ACRE	TOTAL	UNIT	PER UNIT	TOTAL
PARSLEY	1999	1,008	8.67	8,735	TON	\$703.26	\$6,143,000
TOTAL	1998	698	9.40	6,560	"	672.71	4,413,000
Fresh	1999			6,535	"	548.74	3,586,000
	1998			5,135	"	535.93	2,752,000
Food Service	1999			290	"	1,293.10	375,000
	1998			325	"	1,286.15	418,000
Dry (Processing)	1999			1,910	"	1,142.41	2,182,000
	1998			1,100	"	1,130.00	1,243,000
PEAS	1999	317	5.17	1,640	"	1,642.07	2,693,000
	1998	306	5.20	1,590	"	1,634.59	2,599,000
PEPPERS, Bell	1999	1,105	22.20	24,525	"	346.46	8,497,000
TOTAL	1998	531	19.83	10,532	"	355.68	3,746,000
Fresh	1999			10,660	"	488.65	5,209,000
	1998			6,003	"	442.45	2,656,000
Processing	1999			13,865	"	237.14	3,288,000
	1998			4,529	"	240.67	1,090,000
PEPPERS, Chili	1999	1,616	5.03	8,130	"	937.64	7,623,000
TOTAL	1998	2,938	4.94	14,512	"	991.25	14,385,000
Fresh	1999			1,730	"	278.03	481,000
	1998			1,305	"	301.15	393,000
Processing	1999			6,400	"	1,115.94	7,142,000
	1998			13,207	"	1,059.44	13,992,000
RADICCHIO	1999	1,367	3.24	4,430	"	1,793.45	7,945,000
	1998*	1,249	3.28	4,102	"	1,813.85	7,440,000
RADISH	1999	200	14.20	2,840	"	770.77	2,189,000
	1998	542	5.76	3,124	"	780.09	2,437,000

* Correction to last year's figures per acre & per unit.

VEGETABLE CROPS - Continued

CROP	YEAR	PRODUCTION			F. O. B. VALUE		
		ACREAGE	PER ACRE	TOTAL	UNIT	PER UNIT	TOTAL
RAPPINI	1999	2,320	4.26	9,890	TON	\$886.05	\$8,763,000
	1998	2,537	3.75	9,508	"	896.09	8,520,000
SALAD PRODUCTS	1999			35,891,000	CTN	7.88	282,821,000
	1998			32,053,000	"	8.42	269,886,000
SPRING MIX*	1999	7,775	7.08	55,046	TON	1,023.29	56,328,000
	1998	4,784	9.37	44,826	"	893.81	40,066,000
SPINACH TOTAL	1999	13,001	7.27	94,503	"	687.38	64,959,000
	1998	12,270	7.68	94,240	"	646.25	60,903,000
Fresh	1999			45,735	"	607.96	27,805,000
	1998			50,905	"	583.40	29,698,000
Food Service	1999			18,688	"	1,753.91	32,777,000
	1998			16,125	"	1,741.77	28,086,000
Processing	1999			30,080	"	145.51	4,377,000
	1998			27,210	"	114.63	3,119,000
SQUASH TOTAL	1999	661	10.03	6,628	"	462.88	3,068,000
	1998	414	9.44	3,908	"	412.49	1,612,000
Fresh	1999			6,478	"	469.13	3,039,000
	1998			2,903	"	486.05	1,411,000
Processing	1999			150	"	193.33	29,000
	1998			1,005	"	200.00	201,000
TOMATOES TOTAL	1999	1,308	17.80	23,286	"	228.12	5,312,000
	1998	1,891	21.92	41,454	"	306.82	12,719,000
Fresh	1999			17,596	"	291.43	5,128,000
	1998			26,654	"	447.21	11,920,000
Processing	1999			5,250	"	35.05	184,000
	1998			14,800	"	53.99	799,000
TOMATOES Cherry	1999	52	10.58	550	"	712.73	392,000
	1998	60	6.70	402	"	701.49	282,000

*May contain: Tango, Magenta Orach, Red Perella, Red Nagoya, Little Gem, Mizuna, Red Feathering Kale, Green Perella, New Red Fire, Arugula, Beet Tops, Royal Red Oak Leaf, Baby Spinach, Mache, Green Mustard, Dinosaur Kale, Green Kale, Baby Red Romaine, Belgian Endive, Red Butter Lettuce, Tat-Soi, Frisee, Sierra, Cocard, Green Chard, Red Chard, Baby Green Romaine, Red Russian Kale, Red Mustard, Lollo Rosa.

VEGETABLE CROPS - Continued

CROP	YEAR	PRODUCTION			F. O. B. VALUE		
		ACREAGE	PER ACRE	TOTAL	UNIT	PER UNIT	TOTAL

LETTUCE, HEAD

Spring	1999	16,695					
	1998	15,372					
Summer	1999	19,588					
	1998	18,722					
Fall	1999	23,351					
	1998	23,644					
Naked Pack	1999			12,126,000	CTN	\$5.68	\$68,876,000
	1998			11,838,000	"	\$7.38	\$87,364,000
Wrapped Pack	1999			21,630,000	"	\$7.77	\$168,093,000
	1998			21,533,000	"	\$8.88	\$191,213,000
Bulk for Shredding	1999			19,189,000	"	\$4.10	\$78,675,000
	1998			18,341,000	"	\$4.42	\$81,067,000
SEASON TOTAL	1999	59,634	901.90	53,784,000	CTN	\$5.8687	\$315,644,000
	1998	57,738	895.63	51,712,000	"	\$6.9547	\$359,644,000

HEAD LETTUCE	1999	59,634	901.90	53,784,000	CTN	\$5.8687	\$315,644,000
TOTALS	1998	57,738	895.63	51,712,000	"	\$6.9547	\$359,644,000

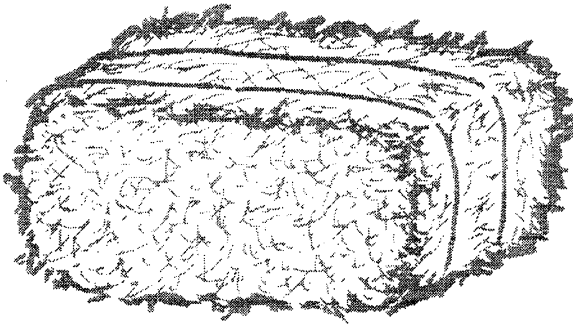
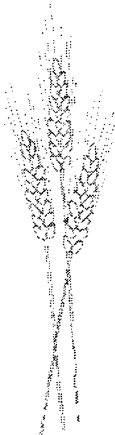
VEGETABLE CROPS - Continued

CROP	YEAR	PRODUCTION			F. O. B. VALUE		
		ACREAGE	PER ACRE	TOTAL	UNIT	PER UNIT	TOTAL
LEAF LETTUCE							
BUTTER LETTUCE	1999	1,885	786.21	1,482,000	CTN	\$6.99	\$10,359,000
	1998	1,052	931.56	980,000	"	6.08	\$5,959,000
GREEN LEAF	1999	9,059	840.05	7,610,000	"	6.14	46,725,000
	1998	8,565	833.86	7,142,000	"	6.60	47,113,000
ENDIVE	1999	508	860.24	437,000	"	5.62	2,456,000
	1998	534	805.24	430,000	"	5.69	2,448,000
ESCAROLE	1999	239	861.92	206,000	"	6.41	1,320,000
	1998	247	854.25	211,000	"	7.22	1,524,000
RED LETTUCE	1999	4,382	842.31	3,691,000	"	6.05	22,331,000
	1998	3,237	867.16	2,807,000	"	6.08	17,080,000
ROMAINE	1999	26,877	887.12	23,843,000	"	7.78	185,468,000
	1998	19,200	886.09	17,013,000	"	7.96	135,500,000
Fresh	1999			16,710,000	"	6.95	116,135,000
	1998			12,657,000	"	7.13	90,287,000
Food Service	1999			7,133,000	"	9.72	69,333,000
	1998			4,356,000	"	10.38	45,213,000
LEAF LETTUCE	1999	42,950	867.73	37,269,000	CTN	\$7.21	\$268,659,000
TOTALS	1998	32,835	867.46	28,483,000	"	\$7.36	\$209,624,000
LETTUCE CROP	1999	102,584		HEAD & LEAF LETTUCE			\$584,303,000
TOTALS	1998	90,573		TOTAL VALUE			\$569,268,000
VEGETABLE CROPS	1999	252,758		VEGETABLE CROPS			\$1,754,923,000
TOTAL ACRES*	1998	230,460		TOTAL VALUE			\$1,649,092,000

*Total acreage represents multiple plantings.

FIELD CROPS

CROP	YEAR	PRODUCTION			UNIT	F. O. B. VALUE	
		ACREAGE	PER ACRE	TOTAL		PER UNIT	TOTAL
BARLEY, Grain	1999	6,450	0.82	5,318	TON	\$82.55	\$439,000
	1998	9,650	0.72	6,930	"	84.85	588,000
BEANS, Dry Large Lima	1999	825	1.20	988	"	1,220.00	1,205,000
	1998	1,004	.81	815	"	1,200.00	978,000
BEANS, Misc. Dry	1999	42	1.31	55	"	763.64	42,000
	1998	12	1.17	14	"	714.29	10,000
HAY, Alfalfa	1999	995	5.83	5,804	"	121.00	702,000
	1998	1,045	5.55	5,804	"	136.63	793,000
HAY, Oat	1999	1,265	3.17	4,005	"	88.39	354,000
	1998	1,405	2.85	4,009	"	107.26	430,000
PASTURE Dry Land	1999	1,107,500		1,107,500	ACRE	6.50	7,199,000
	1998	1,107,500			"	6.50	7,199,000
PASTURE Irrigated	1999	90		90	"	178.00	16,000
	1998	110		110	"	200.00	22,000
SAFFLOWER	1999	768	0.63	480	"	281.25	135,000
	1998	200	0.20	39	"	307.69	12,000
WHEAT, Grain	1999	1,594	0.76	1,205	"	94.61	114,000
	1998	10,465	1.11	11,583	"	89.79	1,040,000






FIELD CROPS	1999	1,119,529		FIELD CROPS		\$10,206,000
TOTAL ACRES	1998	1,131,391		TOTAL VALUE		\$11,072,000

NURSERY CROPS

CROP	YEAR	ACREAGE	AMOUNT SOLD	AVERAGE PRICE	TOTAL
GREENHOUSE CUT FLOWERS			BLOOMS SOLD	PER BLOOM	
ROSE	1999	91.70	45,761,000	\$0.26	\$11,898,000
	1998	122.70	55,538,000	0.23	12,774,000
MINIATURE ROSE	1999	10.38	7,781,000	0.17	1,323,000
	1998	12.16	11,341,000	0.18	2,041,000
CARNATION	1999	73.33	27,639,000	0.14	3,870,000
	1998	76.72	33,447,000	0.15	5,017,000
CARNATION (Miniature)	1999	23.69	2,334,000	0.90	2,101,000
	1998	28.54	1,352,000	1.45	1,960,000
CHRYSANTHEMUM (Standard)	1999	16.03	3,058,000	0.57	1,743,000
	1998	17.19	3,890,000	0.53	2,062,000
GARDENIA	1999		749,400	1.00	749,000
	1998		974,400	1.23	1,199,000
			BUNCHES SOLD	PER BUNCH	
ORCHID	1999		105,000	\$1.80	\$189,000
	1998		140,000	1.85	259,000
INDOOR CUT FLOWERS	1999	215.13	INDOOR CUT FLOWERS		\$21,873,000
TOTAL ACRES	1998	257.31	TOTAL VALUE		\$25,312,000
FIELD GROWN FLOWERS			BUNCHES SOLD	PER BUNCH	
ALSTROEMERIA	1999	36.59	1,235,000	\$1.55	\$1,914,000
	1998	26.85	853,400	1.76	1,502,000
EUCALYPTUS*	1999	535.01	1,934,000	2.49	4,816,000
	1998	459.75	3,737,000	2.02	7,549,000
GYPSOPHILA	1999	5.56	8,000	2.63	21,000
	1998	6.18	6,300	2.06	13,000
IRIS	1999	16.66	329,100	2.55	839,000
	1998	20.42	303,500	2.84	862,000
SNAPDRAGON*	1999	85.74	2,281,000	2.29	5,224,000
	1998	85.95	1,550,000	2.70	4,185,000
STATICE	1999	56.23	421,800	3.72	1,569,000
	1998	56.82	500,100	2.73	1,365,000

*Includes multiple harvested acres.

NURSERY CROPS - Continued

CROP	YEAR	ACREAGE	AMOUNT SOLD	AVERAGE PRICE	TOTAL
<u>POTTED PLANTS</u>			PLANTS SOLD	PER PLANT	
BEDDING PLANTS					
Commercial*	1999	90.00	1,745,634,000	\$0.03	\$57,019,000
Vegetable	1998	92.70	1,210,374,000	0.03	36,311,000
ORCHIDS	1999	22.35	742,000	10.64	7,896,000
	1998	17.06	1,019,000	12.25	12,483,000
POINSETTIA	1999	35.41	827,000	3.79	3,134,000
	1998	13.97	608,300	4.98	3,029,000
PROPAGATIVE STOCK**	1999	171.14	15,934,000	0.94	14,921,000
	1998	223.93	15,163,000	0.75	11,372,000
<u>OTHER PLANTS</u>			PLANTS SOLD	PER PLANT	
MISCELLANEOUS					
Indoor Decorative***	1999	56.38	5,778,000	3.58	20,669,000
	1998	90.76	3,197,000	5.05	16,145,000
OUTDOOR					
Woody Ornamentals	1999	45.06	726,000	5.69	4,131,000
	1998	47.65	547,000	5.56	3,041,000
MISC FIELD CROPS					
****	1999	1,025.81	30,998,000	0.97	30,057,000
	1998	1,295.19	32,935,000	0.94	30,959,000
CHRISTMAS TREES					
	1999	34.16	3,300	29.40	97,000
	1998	44.44	6,400	26.41	169,000
LILLIES*****					
	1999	225.33	11,169,000	0.59	6,642,000
	1998				
					
NURSERY CROPS	1999	2,635.49	NURSERY CROPS		\$180,822,000
TOTAL ACRES*****	1998	2,738.98	TOTAL VALUE		\$154,297,000

*Includes: All vegetable transplants.

**Includes: Bedding plants, Carnations, Fruit tree transplants, Grape cuttings, Mums, Roses.

***Includes: African Violet, Azaleas, Cyclamen, Dieffenbachia, Ficus sp., Gloxinia, Kalanchoe, Potted Mums, Seasonal potted plants, Spathiphyllum, Spring bulbs.

****Includes: Agapanthus, Bulbs, Cactus, Cornflower, Colum Stock, Curly willow, Dianthus, Foliage, Foxglove, Freesia, Godetia, Heather, Larkspur, Leptospermum, Lilies, Lisianthus, Myrtle, Seafoam, Stock, Succulents, Strawflower, Sunflower, Thistles, Tillandsia, Turf, Yarrow. . Total acreage represents multiple plantings.

***** Previously included in Misc.

SEED CROPS

CROP	YEAR	PRODUCTION			UNIT	F. O. B. VALUE	
		ACREAGE	PER ACRE	TOTAL		PER UNIT	TOTAL
BROCCOLI	1999	91.0	0.08	6.83	TON	241,581.26	\$1,650,000
	1998	320.0	0.16	50.80	"	79,015.75	4,014,000
CAULIFLOWER	1999	194.5	0.12	24.26	"	61,665.29	1,496,000
	1998	171.0	0.21	36.50	"	27,452.05	1,002,000
PEAS	1999	443.0	1.41	624.35	"	1,435.09	896,000
	1998	275.0	1.59	438.45	"	2,335.50	1,024,000
PEPPER*	1999				"		
	1998	63.0	0.02	1.07	"	80,373.83	86,000
BEANS, All	1999	2,396.2	0.98	2,339.24	"	1,370.53	3,206,000
	1998	2,217.0	0.88	1,940.50	"	3,013.66	5,848,000
MISC. SEED**	1999	1,935.4	0.50	963.23	"	467.18	450,000
	1998	537.0	1.00	536.00	"	718.28	385,000
SEED CROPS	1999	5,060.1		SEED CROPS			\$7,698,000
TOTAL ACRES	1998	3,583.0		TOTAL VALUE			\$12,359,000

*Reported in Misc. for 1999. **Includes: Barley, Dry beans, Celery, Corn, Cucumber, Flower, Native grasses, Oats, Parsley, Peppers, Pumpkin, Squash, Wheat.



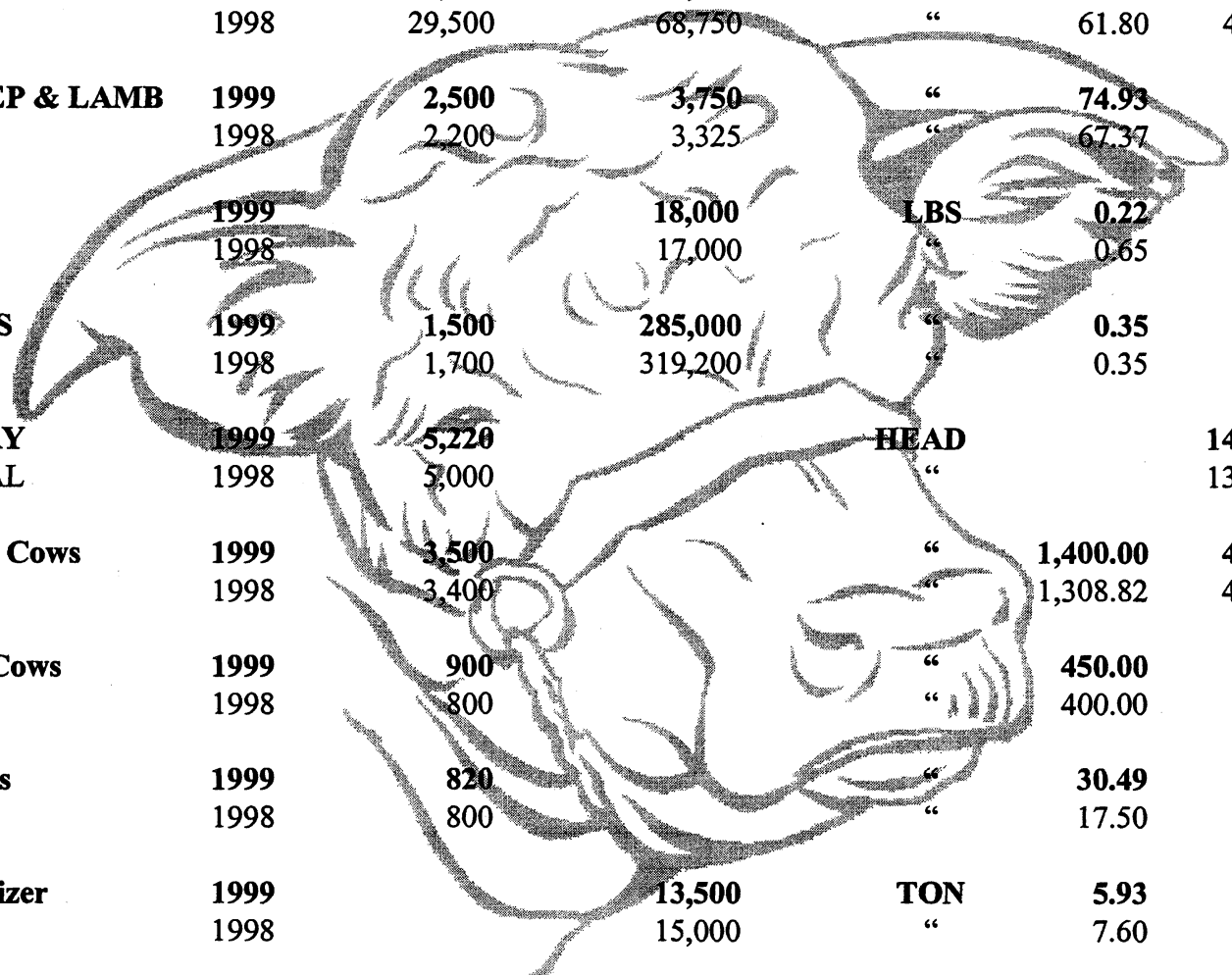
APIARY

CROP	YEAR	COLONIES	PRODUCTION	UNIT	F.O.B. VALUE	
					PER UNIT	TOTAL
HONEY	1999		37,708	LBS	0.48	\$18,100
	1998		38,885	"	0.65	25,275
POLLINATION*	1999	1,100		COLONY	24.00	26,400
	1998	1,500		"	24.00	36,000
WAX	1999		970	LBS	2.01	1,950
	1998		1,382	"	2.25	3,110
APIARY	1999					\$46,450
TOTAL VALUE	1998					\$64,385

*Crops Pollinated: Apple, Broccoli, Carrot, Cauliflower, Cucumber, Fava bean, Melon, Onion, Parsley, Pepper, Spinach, Squash.

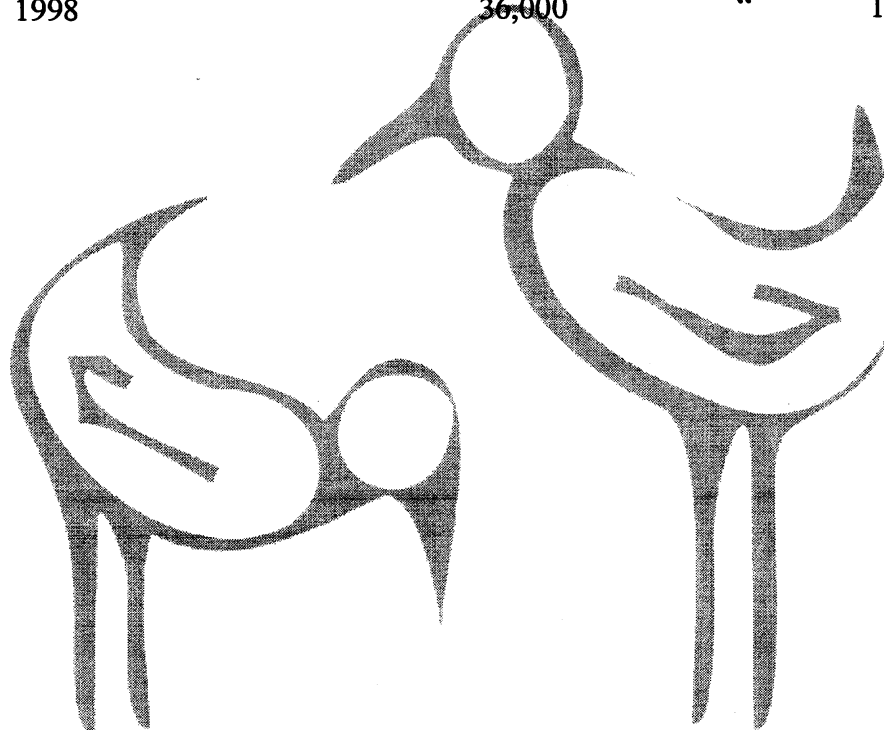
LIVESTOCK & DAIRYING

CROP	YEAR	HEAD	PRODUCTION	UNIT	F. O. B. VALUE	
					PER UNIT	TOTAL
BEEF CATTLE	1999	80,800		CWT		19,469,000
TOTAL	1998	75,300		"		19,481,000
Cattle & Calves	1999	46,300	291,690	"	49.00	14,293,000
	1998	45,800	287,400	"	53.00	15,232,000
Stocker	1999	34,500	80,500	"	64.30	5,176,000
	1998	29,500	68,750	"	61.80	4,249,000
SHEEP & LAMB	1999	2,500	3,750	"	74.93	281,000
	1998	2,200	3,325	"	67.37	224,000
Wool	1999		18,000	LBS	0.22	4,000
	1998		17,000	"	0.65	11,000
HOGS	1999	1,500	285,000	"	0.35	100,000
	1998	1,700	319,200	"	0.35	112,000
DAIRY	1999	5,220		HEAD		14,341,000
TOTAL	1998	5,000		"		13,500,000
Dairy Cows	1999	3,500		"	1,400.00	4,900,000
	1998	3,400		"	1,308.82	4,450,000
Cull Cows	1999	900		"	450.00	405,000
	1998	800		"	400.00	320,000
Calves	1999	820		"	30.49	25,000
	1998	800		"	17.50	14,000
Fertilizer	1999		13,500	TON	5.93	80,000
	1998		15,000	"	7.60	114,000
Milk, Market	1999		646,000	CWT	13.74	8,876,000
Marketing	1998		659,000	"	12.62	8,317,000
Manufactured	1999		3,993	"	13.77	55,000
	1998		24,700	"	11.54	285,000
LIVESTOCK & DAIRYING	1999					\$34,195,000
TOTAL VALUE	1998					\$33,328,000



POULTRY

CROP	YEAR	HEAD	PRODUCTION	UNIT	F. O. B. VALUE	
					PER UNIT	TOTAL
POULTRY	1999	552,338		HEAD	4.63	\$2,560,000
TOTAL	1998	393,200		"	5.43	2,134,800
Broilers, Fryers	1999	525,000	3,533,000	LBS	0.43	1,519,000
Roasters	1998	390,000	2,600,000	"	0.42	1,092,000
Meat Hens	1999	3,600	18,000	"	0.50	9,000
	1998	3,200	16,000	"	0.50	8,000
Misc. Poultry*	1999					1,005,000
	1998					988,000
Eggs	1999		38,000	DOZ	1.42	54,000
	1998		36,000	"	1.30	46,800



POULTRY	1999	\$2,624,000
TOTAL VALUE	1998	\$2,134,800

*Includes: Duck Eggs, Ducklings, Fryers, Goslings, Pullets.

TREND OF MAJOR CROPS IN MONTEREY COUNTY

CROP	YEAR	ACRES	VALUE
ARTICHOKES	1999	6,720	\$43,014,000
	1989	8,360	25,686,000
	1979	9,085	20,801,600
BROCCOLI	1999	53,880	\$241,554,000
	1989	50,960	122,098,000
	1979	36,260	55,661,000
CAULIFLOWER	1999	17,538	\$105,015,000
	1989	21,391	64,411,000
	1979	16,270	32,573,000
CELERY	1999	9,655	\$87,132,000
	1989	5,085	34,456,000
	1979	6,580	28,010,000
GRAPES	1999	34,187	\$157,926,000
	1989	32,646	60,139,000
	1979	33,516	58,344,000
LETTUCE, Head	1999	59,634	\$315,644,000
	1989	64,035	330,901,000
	1979	61,835	157,133,000
LETTUCE, Leaf	1999	42,950	\$268,659,000
	1989	12,863	57,291,000
	1979	4,735	14,443,000
MUSHROOMS	1999	47,584,000	LBS \$61,400,000
	1989	48,290,000	LBS 44,427,000
	1979	23,162,000	LBS 23,162,000
NURSERY CROPS	1999	2,635	\$180,822,000
	1989	1,480	101,180,500
	1979	809	48,082,000
SPINACH	1999	13,001	\$64,959,000
	1989	4,410	11,476,000
	1979	4,624	4,613,000
STRAWBERRIES	1999	6,864	\$217,600,000
	1989	5,050	102,474,000
	1979	2,985	50,109,000

MILLION DOLLAR CROPS

1.	LETTUCE, Head	\$315,644,000
2.	LETTUCE, Leaf	268,659,000
3.	BROCCOLI	241,554,000
4.	STRAWBERRIES	217,600,000
5.	NURSERY, All	180,822,000
6.	GRAPES	157,926,000
7.	CAULIFLOWER	105,015,000
8.	CELERY	87,132,000
9.	SPINACH	64,959,000
10.	MUSHROOM	61,400,000
11.	SPRING MIX	56,328,000
12.	ARTICHOKES	43,014,000
13.	ASPARAGUS	20,828,000
14.	ONIONS, Green	20,600,000
15.	BEEF CATTLE, All	19,469,000
16.	DAIRY, All	14,341,000
17.	CARROTS	12,774,000
18.	RAPPINI	8,763,000
19.	PEPPERS, Bell	8,497,000
20.	RADICCHIO	7,945,000
21.	SEEDS, All	7,698,000
22.	PEPPERS, Chili	7,623,000
23.	KALE	7,258,000
24.	PASTURE, Dry Land	7,199,000
25.	PARSLEY	6,143,000
26.	CABBAGE	5,615,000
27.	ANISE	5,614,000
28.	NAPA	5,414,000
29.	TOMATOES	5,312,000
30.	CILANTRO	4,446,000
31.	GARLIC	3,401,000
32.	ONIONS, Dry	3,324,000
33.	BOK CHOY	3,293,000
34.	SQUASH	3,068,000
35.	PEAS	2,693,000
36.	POULTRY, All	2,560,000
37.	RADISH	2,189,000
38.	CHARD	2,073,000
39.	LEEKs	1,902,000
40.	CITRUS	1,460,000
41.	BEANS, Dry	1,205,000
42.	HERBS	1,180,000

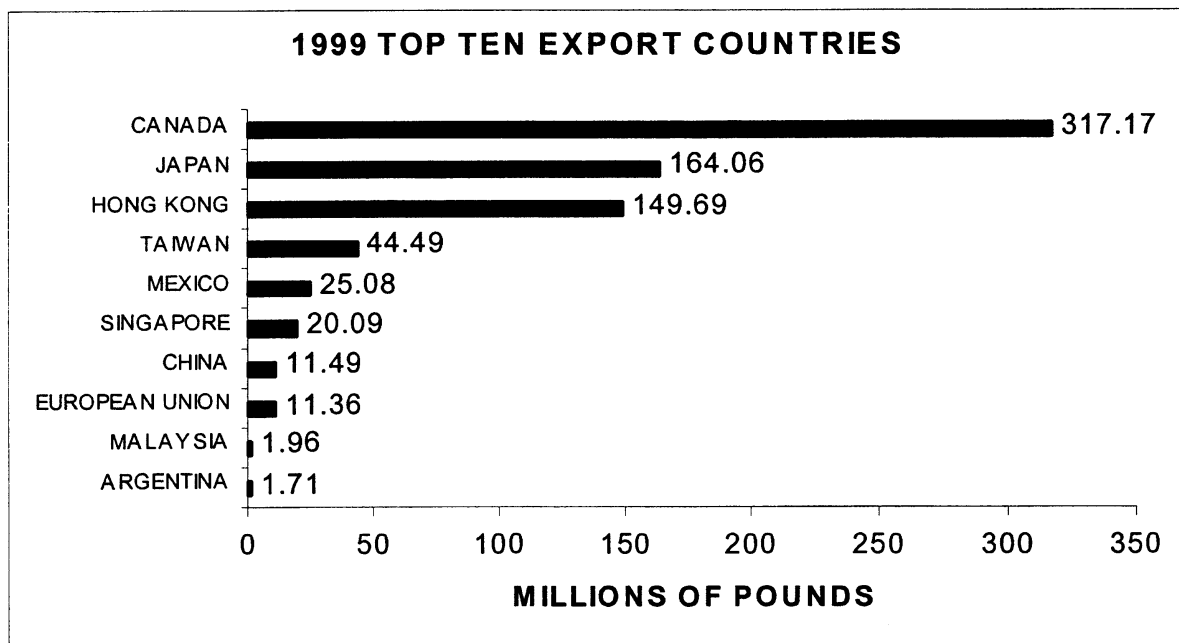
SUMMARY

	YEAR	TOTAL VALUE
FRUITS & NUTS	1999	\$378,666,000
	1998	\$385,062,000
VEGETABLE CROPS	1999	\$1,754,923,000
	1998	\$1,649,092,000
FIELD CROPS	1999	\$10,206,000
	1998	\$11,072,000
NURSERY CROPS	1999	\$180,822,000
	1998	\$154,297,000
SEED CROPS	1999	\$7,698,000
	1998	\$12,359,000
APIARY	1999	\$46,450
	1998	\$64,385
LIVESTOCK, POULTRY, AND DAIRYING	1999	\$36,782,000
	1998	\$35,463,000
ORGANIC	1999	\$72,652,000
	1998	\$45,849,000
SUMMARY TOTAL VALUE	1999	\$2,441,795,450
	1998	\$2,293,258,385

MONTEREY COUNTY EXPORTS TOP 20 PRODUCE SUMMARY

	1999 - lbs	1998 - lbs	1997 - lbs	1996 - lbs	1995 - lbs	1994 - lbs
Lettuce, All	297,400,325	243,698,976	238,140,469	217,465,530	147,012,550	172,608,000
Broccoli	186,575,971	164,855,249	163,852,454	146,890,694	139,810,302	150,681,000
Celery	122,955,927	125,497,213	90,061,531	77,230,648	61,381,696	67,910,000
Strawberries	24,969,409	36,164,228	20,902,272	18,599,424	21,008,409	21,329,000
Cauliflower	23,800,696	31,842,622	24,120,687	15,641,147	10,578,865	20,627,000
Value Added Products	10,146,575	12,511,883 *		*	*	*
Onions, Green	8,731,713	8,203,607	1,027,703	1,817,907	1,515,567	967,258
Tomatoes	6,493,480	4,617,300	21,942,986	9,952,990	6,112,647	24,368,000
Carrots	6,421,226	6,691,060	5,810,790	7,718,010	7,632,676	19,142,000
Cabbage, All	6,155,129	3,505,431	7,224,858	6,716,805	4,441,672	3,255,000
Asparagus	5,006,032	9,007,220	2,951,756	4,016,687	2,629,458	2,232,000
Spinach	4,903,269	4,865,825	5,128,886	2,118,825	1,560,969	2,046,747
Artichokes	4,219,472	3,851,801	2,529,890	610,307	266,893	2,939,328
Anise	3,994,252	3,643,679	3,583,752	3,099,406	2,085,059	3,131,000
Radicchio	3,419,585	4,623,629	7,598,946	6,371,481	3,473,185	3,316,000
Onions, Dry	2,676,138	11,285,950	18,705,624	13,094,008	26,932,646	65,124,000
Rappini	2,176,949	1,812,446	2,176,661	1,529,515	1,874,367	1,821,000
Peppers	1,637,847	1,371,124	473,354	101,838	167,785	893,196
Radishes	986,118	976,212	205,584	215,122	207,640	84,110
Brussel Sprouts	884,640	715,518	278,960	165,219	442,050	608,935
Total For All Produce Exported	723,554,753	956,306,342	928,319,699	778,199,265	680,567,420	570,457,000
All Seed	5,670,752	4,866,104	7,364,998	4,781,155	7,515,380	8,859,000
Cut Flowers (Stems)	3,915,540	4,749,773	5,502,984	3,165,981	3,681,774	1,442,000
Other Nursery Plants	10,742,703	9,654,207	10,302,093	15,257,473	24,770,048	37,748,000

* Data not available; includes salad products and vegetable mix

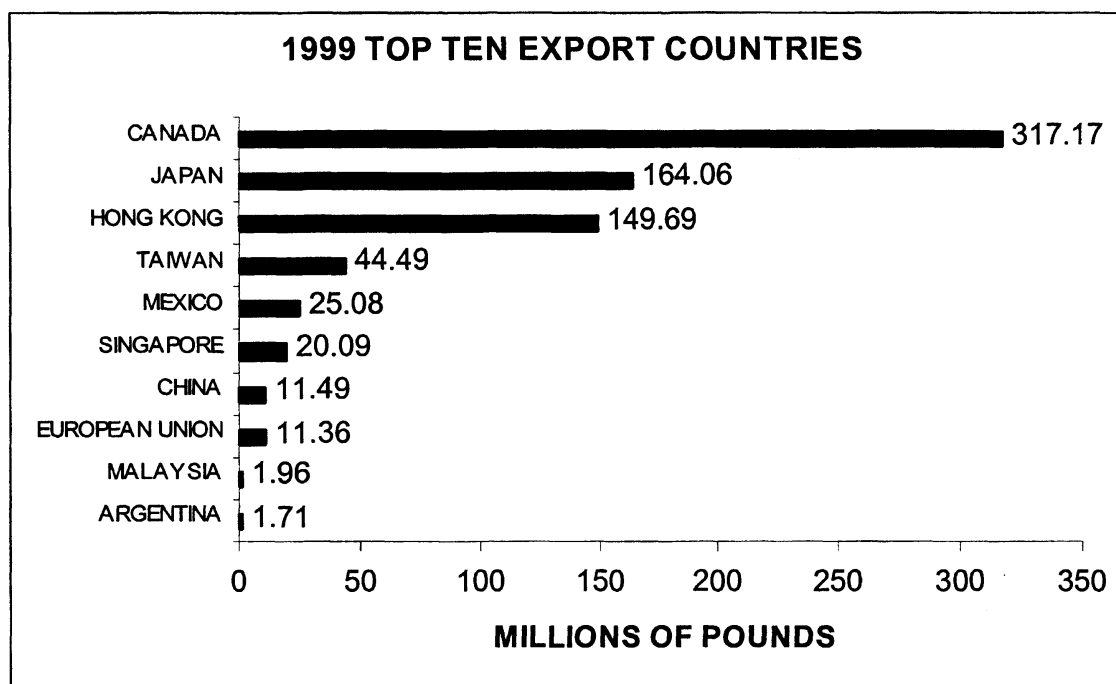


SUMMARY OF PRODUCE EXPORTS BY COUNTRY

	1999 - lbs	1998 - lbs	1997 - lbs	1996 - lbs	1995 - lbs
Canada	317,174,273	351,537,601	300,810,959	241,197,640	179,026,281
Japan	164,064,167	138,056,542	146,507,247	127,676,318	164,101,789
Hong Kong	149,690,472	98,578,133	87,575,229	83,077,219	63,172,685
Taiwan	44,485,523	35,551,233	32,914,374	39,185,450	32,148,882
Mexico	25,075,966	20,085,728	30,577,604	13,840,443	16,286,271
Singapore	20,088,506	13,512,225	18,246,240	20,552,757	15,650,730
China	11,494,142	11,824,150	5,717,880	2,022,420	1,562,584
European Union *	11,359,848	16,049,672	10,205,619	10,478,836	5,134,660
Malaysia	1,959,502	387,940	100	5,568	**
Argentina	1,709,040	57,498	46,189	6,752	179,426
Kuwait	1,546,214	1,077,411	1,596,298	458,360	367,210
Panama	1,316,977	2,465,910	931,785	508,846	700,897
United Arab Emirates	610,878	1,943,656	6,401,520	3,512,860	5,617,020
Republic of Korea	414,116	921,198	878,205	5,555,530	4,177,438
Ecuador	337,050	133,250	**	**	**
Colombia	307,595	499,526	279,087	227,581	35,755
Venezuela	260,820	1,138,980	462,310	48,360	0
French Polynesia	147,816	208,981	727,232	42,052	47,398
Australia	142,492	210,442	227,830	265,600	392,064
Switzerland	133,750	2,946,912	485,758	2,023,805	440,437

**Includes: Austria, Belgium, Denmark, Finland, France, French Guiana, Germany, Greece, Guadeloupe, Ireland, Italy, Luxembourg, Martinique, Monaco, Netherlands, Portugal, Reunion, San Marino, Spain, Sweden, United Kingdom, Vatican City State.*

***Insufficient to report*



SUMMARY OF MONTEREY COUNTY SUSTAINABLE AGRICULTURAL ACTIVITIES

PEST	AGENT/MECHANISM	SCOPE OF PROGRAM*
COUNTY BIOLOGICAL CONTROL		
Yellow StarThistle, <i>Centaurea solstitialis</i>	Seedhead weevils/Fly, <i>Bangasternus orientalis</i> , <i>Eustenopus villosus</i> <i>Urophora sirunaseva</i> , <i>Larinus curtus</i>	30 sites
Italian thistle, <i>Carduus</i> spp.	Seedhead weevil, <i>Rhinocyllus conicus</i>	General distribution
Russian thistle, <i>Salsola australis</i>	Leaf & stem mining moths, <i>Coleophora</i> spp	7 sites
Puncture vine, <i>Tribulus terrestris</i>	Stem & seed weevils, <i>Microlarinus</i> spp.	General and local dist.
Aphid species	Seven-spotted lady beetle, <i>Coccinella septempunctata</i>	1 site
Ash whitefly, <i>Siphoninus phillyreae</i>	Parasitic wasp, <i>Encarsia inaron</i>	General distribution
PEST ERADICATION		
Taurian thistle, <i>Onopordum tauricum</i>	Mechanical/chemical	72 plants treated
Scotch thistle, <i>Onopordum acanthium</i>	Mechanical/chemical	116 plants treated
Skeletonweed, <i>Chrondrilla juncea</i>	Mechanical/chemical	48 plants treated
Puna grass, <i>Achnatherum brachychaetum</i>	Mechanical/chemical	10 infestations
Spotted knapweed, <i>Centaurea maculosa</i>	Mechanical/chemical	1 plant found/removed
Fertile capeweed, <i>Arctotheca calendula</i>	Mechanical	1 infestation

Diffuse Knapweed (*Centaurea diffusa*), Hydrilla (*Hydrilla verticillata*), and biddy-biddy (*Acaena novae-zelandiae*) have been eradicated.

PEST MANAGEMENT

Roadside (virus host) weeds	Chemical	825 miles, County right-of-ways
Lettuce Mosaic Virus	Virus-free seed	Indexing of all County-planted seed
Lettuce Mosaic Virus	Host-free period	No lettuce above ground 12/71-12/21
Celery Mosaic Virus	Host-free period	No celery above ground in January

PEST EXCLUSION

Pest exclusion terminal inspections involved 3,867 hours, during which 28,601 incoming shipments were inspected. One hundred eleven shipments were rejected in violation of quarantine regulations.

PEST DETECTION

Pest detection is the systematic search for pests outside of a known infested area, or for pests not known to occur in California. The general goal is to detect the insects before they become established over an area so large that eradication is no longer biologically or economically feasible. Detection trapping is performed primarily by the County Agricultural Commissioner's offices.

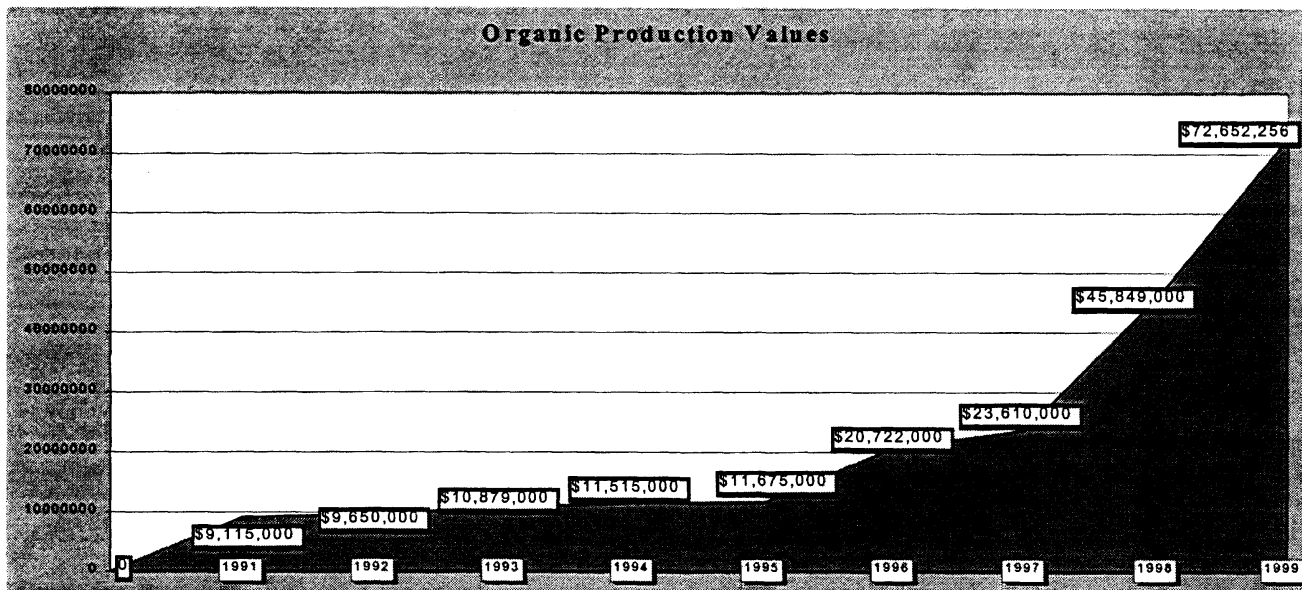
TARGET PEST	INSECT HOSTS	NO. OF TRAPS
Medfly	Fruit trees	280
Melon fruit fly	Vegetable gardens	45
Mexican fruit fly	Fruit trees	84
Oriental fruit fly	Fruit trees	94
Gypsy moth	Shade trees	257
Japanese beetle	Turf, roses	164
Apple maggot	Apple orchards	24
European corn borer	Corn	3
Nantucket pine tip moth	Monterey pine	9
Trogoderma beetle	High hazard commodities	15

Pest detection trapping activities accounted for 3,915.5 hours, with a total of 8,697 services of 975 traps being made. Twenty-five hours were applied to inspecting 36 commercial crop sites of 15 net acres/655 gross acres. Nineteen calls to residences were made for investigation of suspect reports and 86 hours were utilized on inspection/identification of public-reported pests. Nineteen hazard locations were inspected and 263 miles of entryways surveyed, accounting for 34.5 and 46.5 hours respectively. Special surveys were made for exotic aquatic weeds, red imported fire ant, and glassy-winged sharpshooter.

*Represents total number of individual sites, plants, etc. incorporated in program effort (surveys, collection, releases, etc.)

Organic Agriculture in Monterey County

Organic farming in Monterey County continues its solid growth. As the growth increases so does the speculation, much like the stock market. Once again, the increase is a new record high... \$72,652,256. We now have eighty-six registered organic farmers, which vary in size from a quarter acre and up, representing 6,578 total acres in Monterey County for 1999. In 1998, 4,712 acres were organically farmed yielding a total value of \$45,848,870. Growers who are already registered continue to add more organic acres. The large growers entering this market segment should greatly impact the next two years as the majority of growing grounds are currently in transition. Organic farming in Monterey County is represented by every major farm commodity. The diversity of fresh organic products include items such as gourmet salad mixes, wine, herbs, berries, edible flowers, broccoli, cauliflower, spinach, chard, raddichio, and many other varieties just as in conventional farming.



What Is GIS?

A geographic information system (GIS) is a computer-based tool for mapping and analyzing things that exist and events that happen on earth. GIS technology integrates common database operations such as query and statistical analysis with the unique visualization and geographic analysis benefits offered by maps. These abilities distinguish

GIS from other information systems and make it valuable to a wide range of public and private enterprises for explaining events, predicting outcomes, and planning strategies.

We face major challenges in today's world such as; overpopulation, development, pollution, deforestation, natural disasters which take on critical geographic dimensions. Whether starting a new business, finding the best soil for growing grapes or figuring out the best route for an emergency vehicle, local problems also have a geographical component. GIS will give you the power to create maps, integrate information, visualize scenarios, solve complicated problems, present powerful ideas and develop effective solutions like never before. GIS is a tool used by individuals and organizations, schools, governments and businesses seeking innovative ways to solve their problems. Mapmaking and geographic analysis are not new, but GIS performs these tasks better and faster than the old manual methods. Before GIS technology, only a few people had the skills necessary to use geographic information to help with decision making and problem solving.

Today, GIS is a multibillion-dollar industry employing hundreds of thousands of people worldwide. GIS is taught in schools, colleges and universities throughout the world. Professionals in every field are increasingly aware of the advantages of thinking and working geographically.

GIS in Monterey County

GIS all starts with education. Information Technology now staffs an Environmental Systems Research Institute (ESRI) certified ArcView GIS instructor, Josephine Thompson. Two introduction classes have been presented already this year with more to come. Jennifer Coleman supervises the GIS Team. Listed below is a sampling of projects by departments currently using or planning to use GIS in their everyday operations:

- Department of Social Services: Service Allocation, Childcare Placement, CalWorks, Client Demographics
- Water Resources Agency: Salt Water Intrusion, Aquifer Recharge, Precipitation Monitoring, Flood Control, Water Quality Monitoring, Water Reclamation, Development Review
- Environmental Resource Policy: General Plan Update, Redevelopment, Fort Ord Reuse
- Planning and Building Inspection: Environmental Constraints, Land Use, Zoning, Census

- Environmental Health: Hazardous Materials Monitoring, Permit/Inspection Review
- Public Works: Accident Monitoring, Pavement Management, Ground Control Densification
- Transportation Agency of Monterey County: Regional Transportation Planning
- Agricultural Commissioner: Pesticide Permits, Ranch Map, Insect Trapping, Soils
- Emergency Communications: 911 Computer-Aided Dispatch
- Office of Emergency Services: Risk Assessment and Planning
- Emergency Medical Services: Resource Allocation and Planning
- Sheriff: Crime Intelligence and Analysis, Megan's Law
- Information Technology: Telecommunication System Design, System Administration, GIS Support, Data Development, Application Development, Training
- Three major data sets under development are Street Centerline, Parcels, and Orthophotography

Reference: Environmental Systems Research Institute, Redlands, CA
 (www.ESRI.com for more information about GIS).

1999 MONTEREY COUNTY RANCH MAP

The Agricultural Commissioner's Office produces and updates this map annually. The book is intended for internal use, for the benefit of the agricultural community and for the citizens of Monterey County. The map reflects as accurately as possible, actual Monterey County Parcels and shows the ranch names and the growers associated with each ranch where space permits. This Ranch Map has a new look for 1999. It is computer generated ArcView GIS, Version 3.1.

In 1993, Monterey County Water Resources Agency, under special contract did the initial Zone 2A, parcel development. Ortho-photographs and the Monterey County Assessors Parcel Maps were utilized to generate this GIS computer parcel coverage. Monterey County has revised, updated and added to this parcel coverage since

1993. The database associated with this map is obtained from the ranch names and growers on the Pesticide Use Permits database that our office maintains.

This map project is a work in progress. It is improved with each edition. We welcome suggestions for future editions. Please contact our office at (831) 759-7325 or send your comments and corrections to Ranch Map Editor, Agricultural Commissioner's Office, 1428 Abbott St. Salinas, CA. 93901. Special thanks goes to Lori Silvas our Ranch Map Editor for this 1999 edition.

Nurseries in Transition

The Japanese first came to the Salinas Valley as migratory farm laborers. Throughout the period 1907 to 1925, the majority of the Japanese worked in the fields. They worked in the sugar beet fields, in vegetable fields, potato fields and in the orchards. They began to sharecrop and then to lease land. There were restrictions on land purchasing and leasing by non-citizens that made it difficult for Japanese to own the land they farmed. The First World War caused a boom in California agriculture. Many Japanese farmers did well and expanded their acres. After the war, the markets fell and many foreclosures resulted. During the First World War, the U.S. and Japan were allies. After the war, anti-Japanese sentiments increased and the "Second Alien Land Law" further tightened land restrictions on the Japanese. During the 1920's and 1930's, the Japanese continued to develop their niche in the region's agriculture. They often paid high prices to obtain leases. The Japanese American Citizens League employed farm advisors who helped Japanese growers. They grew strawberries and many other vegetable crops. Saburo Kitayama planted the first commercial broccoli crop in the county in 1926. Japanese farmers also planted the first lettuce in the Salinas Valley in 1922. By 1940, Japanese growers were well established in agriculture. Over half the strawberries, celery, snap beans, peppers, cauliflower and spinach grown in California were grown by Japanese farmers.

Then came WWII and the Japanese were relocated away from the coast in 1942. Many Japanese farmers had to abandon their crops. These crops were important to the war effort. Others came in and took over the lands, which were mostly leased. The Japanese had little left to come back to when they returned. European-American

growers had consolidated their hold on the vegetable industry. The strawberry industry had changed during the war. Production of strawberries had dropped to zero during the war. New strawberry hybrids had been developed and the Japanese had to start over under a large handicap. They had lost their leases, equipment and position in the market. Starting in 1952, immigration rules against Japanese eased and more Japanese began to immigrate to California. The Japanese created one new agricultural niche: raising flowers in greenhouses. Second-generation Japanese were the pioneers and the industry attracted many new immigrants. The new workers would learn the business and start their own nurseries. The nursery, specifically the cut flower industry, was lucrative for many years. Then imports from South America began to depress prices. Nursery growers continue to search for new agricultural niches, as they have always.

Conversion to Transplants

One of those niches is the increased demand for nursery and vegetable transplants. Growers can enter into the market early or hold off based on projected demand, market trends or weather. Transplants are used in vegetable and nursery production for two main reasons; Earlier production from a plant that is partially grown can result in higher prices for early vegetables and establishment of market contacts sooner. In the nurseries this can mean a quicker turn-over and higher yields per square foot. Vegetable transplants can save growers weeks and bring uniformity and consistency of the crop. Transplants also save time and labor in weeding, giving the crop an advantage as they already have staged growth development.

Hydroponics

One of the more recent additions to agricultural production in Monterey County is hydroponics. The term hydroponics denotes soilless culture of plants. The possibilities of this technique have received considerable attention in recent years, especially by our local greenhouse growers competing for flower sales with the South

American market. In hydroponics, the plants are grown with their roots immersed in a water solution containing necessary minerals or rooted in a rock wool medium kept moistened and aerated with water solution.

The advantages of hydroponic growing are an increased yield through complete nutritional and environmental control. Other advantages are the absence of competing weeds and soil-borne diseases, increased crop density and reduced water consumption. With recycling systems, hydroponics uses one-tenth the amount of water used by irrigated agriculture. Growing medium are easily sterilized and conditions can be altered quickly to suit specific crops or the growth stage of a particular crop.

The main disadvantage in getting started in hydroponics is the initial set-up cost. The cost of a good installation is fairly high, but if quality materials are used, that cost can be spread out over many years. Still, when all is said and done hydroponics does offer another means to farming crops such as tomatoes, cucumbers, lettuce varieties, herbs... there really is no limit to the variety. Also, plants can be grown year-round with multiple growing seasons in shorter time and reduced water consumption.

Dividing up the Farm Pie

The increasing gap between retail prices and farm prices in the 1990's is due largely to the exploitation of market power. The corporate retailers continue to get larger, mostly by acquisition of smaller chains or independents. According to local sales offices, the buyer group is getting smaller, giving the corporate retailer more bargaining power in offering price to growers. In addition to this, while farm prices are flat or down, the costs of delivering products continue to escalate.

The County crop report shows gross returns, not net returns, and no allowances have been made for shipping, processing, or sales and marketing costs. It also is not reflective of the net crop value remaining, if any, that would be returned to the farm to pay the costs of growing the crop. It is possible that while a crop's value countywide may show an increase in value, the net returns to the farm may decrease in value on a per acre basis. The following data represent typical break-even costs per carton and per head for various commodities. The grower must receive more than this typical price to make a profit.

Break Even Growing, Packing, Cooling & Sales Costs

	Growing Cost	Packing & Shipping	Cooler Cost	Sales Cost	Total Cost/Acre	Break even Cost/carton	Break Even Cost/Head
Head Lettuce	\$2,700	\$2,800	\$1,080	\$400	\$6,980	\$8.73	\$0.36
Broccoli	\$2,300	\$2,070	\$1,012	\$375	\$5,757	\$7.68	\$0.55
Cauliflower	\$2,850	\$3,563	\$1,012	\$375	\$7,800	\$10.40	\$0.87
Mix Lettuce	\$2,200	\$2,465	\$1,148	\$425	\$6,238	\$7.34	\$0.31
Romaine	\$2,300	\$2,465	\$1,148	\$425	\$6,338	\$7.46	\$0.31

