



1988



ANNUAL
REPORT

San Luis Obispo County

D E P A R T M E N T

O F

A G R I C U L T U R E

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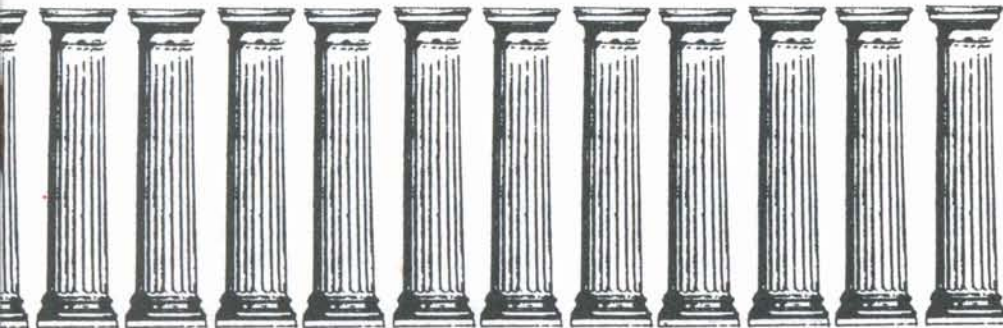
M E A S U R E M E N T S T A N D A R D S



AGRICULTURAL

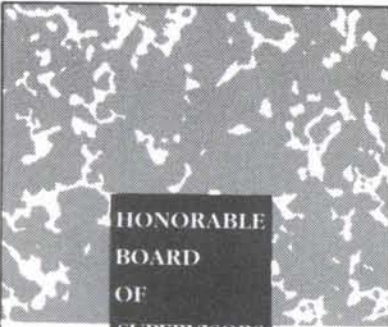


BIOLOGICAL



C O N T R O L





HONORABLE BOARD OF SUPERVISORS

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- MR. WILLIAM COY
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- MS. EVELYN DELANY
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- MR. JAMES JOHNSON
Chairman, District IV
- MR. DAVID BLAKELY
District V

MR. ROBERT HENDRIX

San Luis Obispo County Administrative Officer

MR. HENRY VOSS

California State Department of Food & Agriculture



DEPARTMENT OF AGRICULTURE & MEASUREMENT STANDARDS

2156 Sierra Way Suite A San Luis Obispo California 93401 (805) 549-5910

AGRICULTURAL COMMISSIONER/ SEALER OF WEIGHTS & MEASURES

■ RICHARD D. GREEK

ASSISTANT AGRICULTURAL COMMISSIONER

■ ROBERT F. LILLEY

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- Charlean Bogan
- Linda U. Leos
- Erin Myers
- Troy L. Wolvertson-Duque

AGRICULTURAL INSPECTORS/ BIOLOGISTS

- Charles B. Alender
- Chris Browning
- Janice Cambell
- Alicia Doran
- P. Kim Frank
- Judy Fraser
- Rusty Hall
- Tamara Kleeman
- Catherine Krause
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- Bernarr M. Boaz
(Technical Deputy)
- Jan G. Hendrix
- Lance C. Millspaugh

AGRICULTURE/ MEASUREMENT STANDARDS AIDES

- Mary Hertel
- Dennis Knowles
- Christine Linné
- Ed Virgin

CURRENT TEMPORARY EMPLOYEES

- Joyce Connelly
- Jackie Crabb
- Beverly Gingg
- Gail Perez
- Gisele Schoniger
- Carol Smithback

FISCAL YEAR CONTRIBUTORS 1987 · 1988

Temporary Inspector
Debbie Barker

Agricultural/
Measurement Standard Aides

- Sandy Jordan ■ Suzanne McCaslin
- Karen Wellman

Temporary Aides

- Johna Cochran ■ Toni Tabbert
- Suzanne Talams ■ Mark Webb

I N D I V I D U A L

E F F O R T

C O M M O N

G O A L



AGRICULTURAL
BIOLOGICAL
CONTROL

is the deliberate use of natural enemies to reduce and control agricultural pest populations.



Centuries ago, Chinese farmers built bamboo bridges to accommodate ants crossing from fruit tree to fruit tree; the ants controlled leaf-eating insects.

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REPORT
1987
1988



Our annual report reflects production and values for agricultural crops produced in San Luis Obispo County for the calendar year 1988. The report also portrays our biological pest control efforts, as well as containing program and fiscal information.

Agricultural commodities produced in 1988 totaled an estimated \$267,285,000 in "gross receipts." This represents a new all-time high for the value of agriculture in the county. It should also be noted that the total value of "agribusiness" to a geographic area is estimated by using a 2.25 multiplying factor for an estimated local economic value of \$601,391,000.

AGRICULTURAL BIOLOGICAL CONTROL, or "A B C, Building A Better Future," is the theme for this year's report. As pest control becomes more challenging in the future, the doors are wide open for expanding and integrating acceptable methods of pest control. As you browse through the report, you will see various examples of how San Luis Obispo County's Department of Agriculture is trying to build a better future through the use of biological control.

We would like to pay a special thanks to those in the agricultural community who cooperated by providing data and insight, and for all of our hard-working staff who compiled and finalized the report.

Sincerely,

A handwritten signature in cursive script that reads "Richard Greek".

Richard Greek
Agricultural Commissioner/Sealer



The first import of a natural pest enemy occurred in 1762. The French introduced the mynah bird to Mauritius (an island in the Indian Ocean) to control the red locusts.



In 1946, St. Johnswort: a weed pest had infested two million acres in California. A beetle from Europe was imported, which reduced the infestation 99% and continues to control St. Johnswort today.



*St. Johnswort
Hypericum*

V

VEGETABLE CROPS

Overall value of the vegetable crop industry declined slightly in 1988 due to slumping prices and acreage for iceberg lettuce and edible pod peas. Most other commodities increased in value, most notable being celery and Chinese vegetables.

HARVESTED CROP PRODUCTION

HARVESTED CROP VALUE

CROP	1988	1987		1988	1987
BEANS, GREEN					
ACREAGE	408	335	UNIT	30 LBS	30 LBS
CARTONS PER ACRE	488	408	PER UNIT	\$9.90	\$9.50
TOTAL CARTONS	199,104	144,840	TOTAL	\$1,971,000	\$1,382,000
BELL PEPPERS					
ACREAGE	1,134	1,020	UNIT	30 LBS	30 LBS
CARTONS PER ACRE	645	557	PER UNIT	\$5.52	\$6.97
TOTAL CARTONS	731,430	568,140	TOTAL	\$4,037,000	\$3,960,000
BROCCOLI, FRESH					
ACREAGE	5,820	5,783	UNIT	23 LBS	23 LBS
CARTONS PER ACRE	627	603	PER UNIT	\$4.80	\$4.77
TOTAL CARTONS	3,649,140	3,487,149	TOTAL	\$17,516,000	\$16,634,000
BROCCOLI, FREEZER					
ACREAGE	787	875	UNIT	TON	TON
TONS PER ACRE	5	3.77	PER UNIT	\$360	\$370
TOTAL TONS	3,935	3,299	TOTAL	\$1,417,000	\$1,221,000
BRUSSELS SPROUTS					
ACREAGE	66	165	UNIT	25 LBS	25 LBS
CARTONS PER ACRE	279	610	PER UNIT	\$7.20	\$6.75
TOTAL CARTONS	18,414	100,650	TOTAL	\$133,000	\$679,000
CABBAGE					
ACREAGE	563	457	UNIT	45 LBS	45 LBS
CARTONS PER ACRE	776	736	PER UNIT	\$3.65	\$4.53
TOTAL CARTONS	436,888	336,352	TOTAL	\$1,595,000	\$1,524,000
CARROTS					
ACREAGE	2,813	3,209	UNIT	TON	TON
TONS PER ACRE	26	23	PER UNIT	\$132.31	\$120
TOTAL TONS	73,138	73,807	TOTAL	\$9,677,000	\$8,857,000
CAULIFLOWER					
ACREAGE	2,261	2,547	UNIT	25 LBS	25 LBS
CARTONS PER ACRE	588	547	PER UNIT	\$5.77	\$5.73
TOTAL CARTONS	1,329,468	1,393,209	TOTAL	\$7,671,000	\$7,983,000
CELERY					
ACREAGE	1,053	796	UNIT	60 LBS	60 LBS
CARTONS PER ACRE	1,171	1,160	PER UNIT	\$6.59	\$4.82
TOTAL CARTONS	1,233,063	923,360	TOTAL	\$8,126,000	\$4,451,000
CHINESE VEGETABLES					
ACREAGE	1,261	868	UNIT	80 LBS	80 LBS
CARTONS PER ACRE	693	691	PER UNIT	\$6.99	\$5.46
TOTAL CARTONS	873,873	599,788	TOTAL	\$6,108,000	\$3,275,000
EDIBLE PEA PODS					
ACREAGE	3,750	4,050	UNIT	10 LBS	10 LBS
CARTONS PER ACRE	526	495	PER UNIT	\$9.03	\$11.04
TOTAL CARTONS	1,972,500	2,004,750	TOTAL	\$17,812,000	\$22,132,000
ICEBERG LETTUCE					
ACREAGE	7,686	7,856	UNIT	50 LBS	50 LBS
CARTONS PER ACRE	714	692	PER UNIT	\$5.28	\$6.71
TOTAL CARTONS	5,487,804	5,436,352	TOTAL	\$28,976,000	\$36,478,000
LEAF LETTUCE					
ACREAGE	1,663	960	UNIT	50 LBS	50 LBS
CARTONS PER ACRE	848	865	PER UNIT	\$3.81	\$5.86
TOTAL CARTONS	1,410,224	828,480	TOTAL	\$5,373,000	\$4,855,000
NC SQUASH					
ACREAGE	328		UNIT	30 LBS	
CARTONS PER ACRE	646		PER UNIT	\$6.28	
TOTAL CARTONS	211,888		TOTAL	\$1,331,000	
MISCELLANEOUS					
ANISE, ARTICHOKE, CHILI PEPPERS, GARLIC, ONION, PARSLEY, PARSNIP, RUTABAGA, RADISH, SPINACH, SWEET CORN, TOMATOES, TOMATILLO, TURNIP, WATERMELON					
TOTAL ACRES	1,510	1,510	TOTAL	\$5,705,000	\$5,018,000
TOTAL					
VEGETABLE PRODUCTION					
ACREAGE	31,103	30,451	VALUE	\$117,448,000	118,449,000

Beetles comprise 40% of all insect species on earth



"Lady bugs" are one of the most valued predators used in bio control. They eat at night consuming as many as 5,000 aphids in their lifetime.



F

FRUIT & NUT CROPS

Total value for the various fruit and nut crops grown in the county increased substantially. This was due primarily to improved prices for wine grapes, lemons, and avocados. The only commodities that decreased in value were almonds and pistachios.

HARVESTED CROP PRODUCTION			HARVESTED CROP VALUE		
CROP	1988	1987		1988	1987
ALMONDS					
ACREAGE	4,782	4,911	UNIT	TON	TON
TONS PER ACRE	0.011	0.025	PER UNIT	\$3,509	\$2,820
TOTAL TONS	53	122	TOTAL	\$186,000	\$344,000
APPLES					
ACREAGE	430>C	430>C	UNIT	TON	TON
TONS PER ACRE	6.63	10.50	PER UNIT	\$499	\$240
TOTAL TONS	2,851	4,515	TOTAL	\$1,423,000	\$1,084,000
AVOCADOS					
ACREAGE	1,299>C	1,300>C	UNIT	TON	TON
TONS PER ACRE	1.806	1.70	PER UNIT	\$1,611	\$525
TOTAL TONS	2,346	2,210	TOTAL	\$3,779,000	\$1,160,000
BUSHBERRIES					
ACREAGE	50	44	UNIT	TON	TON
TONS PER ACRE	2.53	2.15	PER UNIT	\$2,697	\$2,768
TOTAL TONS	127	95	TOTAL	\$343,000	\$263,000
GRAPES, WINE					
ACREAGE	7,255	6,459	UNIT	TON	TON
TONS PER ACRE	4.50	4.12	PER UNIT	\$656	\$479
TOTAL TONS	32,648	26,611	TOTAL	\$21,417,000	\$12,747,000
KIWI FRUIT					
ACREAGE	102	117	UNIT	TON	TON
TONS PER ACRE	2.20	1.80	PER UNIT	\$1,871	\$1,771
TOTAL TONS	224	211	TOTAL	\$419,000	\$373,000
LEMONS					
ACREAGE	905>C	866>C	UNIT	TON	TON
TONS PER ACRE	10.80	15.70	PER UNIT	\$405	\$232
TOTAL TONS	9,774	13,596	TOTAL	\$3,958,000	\$3,154,000
VALENCIA ORANGES					
ACREAGE	68	68	UNIT	TON	TON
TONS PER ACRE	22.60	20.00	PER UNIT	\$260	\$252
TOTAL TONS	1,537	1,360	TOTAL	\$400,000	\$343,000
STRAWBERRIES					
ACREAGE	369	349	UNIT	TON	TON
TONS PER ACRE	24	24	PER UNIT	\$826	\$789
TOTAL TONS	8,856	8,376	TOTAL	\$7,315,000	\$6,609,000
PISTACHIOS					
ACREAGE	78	78	UNIT	TON	TON
TONS PER ACRE	0.19	0.30	PER UNIT	\$3,430	\$3,137
TOTAL TONS	15	23	TOTAL	\$51,000	\$73,000
ENGLISH WALNUTS					
ACREAGE	2,962>C	2,962>CR	UNIT	TON	TON
TONS PER ACRE	0.442	0.383	PER UNIT	\$995	\$774
TOTAL TONS	1,309	1,134	TOTAL	\$1,302,000	\$878,000
MISCELLANEOUS					
APRICOT, ASIAN PEAR, BLACK WALNUT, CHERRY, FEIJOA, LIME, NAVAL ORANGE, PEACH, PEAR, PERSIMMON, PLUM, POMEGRANATE, TABLE GRAPES					
TOTAL ACRES	250	250	TOTAL	\$921,900	\$97,500
TOTAL					
FRUIT & NUT PRODUCTION					
ACREAGE	18,628	17,834	VALUE	\$41,515,000	27,126,000

1980



Accidental import of the Mediterranean fruit fly cost California over 100 million dollars in eradication measures

"Unit" refers to the standard unit of measure used to determine market value for a specific commodity.

NC new category added this year

R revised statistic from last year's report

>C less than the California state requirement for bearing acre

F

FIELD CROPS

Field crop producers enjoyed their best returns in recent years. Although there as an overall decrease in production acres, the prices the growers received for grain crops, alfalfa, and safflower went up significantly.

HARVESTED CROP PRODUCTION			HARVESTED CROP VALUE		
CROP	1988	1987	1988	1987	
ALFALFA HAY					
ACREAGE	5,100	5,263	UNIT	TON	TON
TONS PER ACRE	6.60	6.50	PER UNIT	\$102	\$93
TOTAL TONS	33,660	34,210	TOTAL	\$3,433,000	\$3,182,000
BARLEY					
ACREAGE	62,500	65,000	UNIT	TON	TON
TONS PER ACRE	1.30	1.10	PER UNIT	\$122	\$80
TOTAL TONS	81,250	71,500	TOTAL	\$9,913,000	\$5,720,000
GARBANZO					
ACREAGE	715	1,515	UNIT	CWT	CWT
CWT PER ACRE	6.50	6.00	PER UNIT	\$21	\$21
TOTAL CWT	4,648	9,090	TOTAL	\$98,000	\$191,000
GRAIN HAY					
ACREAGE	32,000	36,000	UNIT	TON	TON
TONS PER ACRE	2.45	2.00	PER UNIT	\$78	\$68
TOTAL TONS	78,400	72,000	TOTAL	\$6,115,000	\$4,896,000
GRAIN, STUBBLE/GRAZING					
TOTAL ACRES	92,000	95,000	UNIT PER UNIT TOTAL	ACRE \$4	ACRE \$4
				\$368,000	\$380,000
IRRIGATED PASTURE					
TOTAL ACRES	5,600	5,600	UNIT PER UNIT TOTAL	ACRE \$200	ACRE \$200
				\$1,120,000	\$1,120,000
RANGELAND, DRYLAND					
TOTAL ACRES	1,065,000	1,070,000	UNIT PER UNIT TOTAL	ACRE \$5.50	ACRE \$5.50
				\$5,858,000	\$5,885,000
SAFFLOWER					
ACREAGE	2,500	2,722	UNIT	TON	TON
TONS PER ACRE	0.38	0.26	PER UNIT	\$255	\$224
TOTAL TONS	950	708	TOTAL	\$242,000	\$159,000
WHEAT					
ACREAGE	25,000	25,000	UNIT	TON	TON
TONS PER ACRE	0.95	1.00	PER UNIT	\$118	\$90
TOTAL TONS	23,750	25,000	TOTAL	\$2,803,000	\$2,250,000
MISCELLANEOUS					
SILAGE CORN, DRY BEANS, SUDANGRASS, WINTER FORAGE					
TOTAL ACRES	1,500	2,795	TOTAL	\$290,000	\$540,000
TOTAL					
FIELD CROP PRODUCTION			VALUE		
ACREAGE	\$1,291,915	\$1,308,895		\$30,240,000	\$24,323,000

NATURAL

PEST

ENEMIES

■ PREDATOR

an animal that captures another animal or organism (prey) and devours it as part of their requirement for nourishment and development



■ PARASITE

an organism that lives in or on another living organism (host) and uses the host to complete its own life cycle



■ PATHOGEN

an organism or "agent" which has the ability to cause disease.

Pathogens used in bio

control today : 250 viruses

80 bacteria

460 fungi

250 protozoa

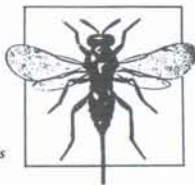
20 rickettsia

S

S E E D C R O P

Crop seed production values increased this year due to an increase in production acreage.

HARVESTED CROP PRODUCTION			HARVESTED CROP VALUE		
SEED	1988	1987		1988	1987
VEGETABLE					
TOTAL ACRES	214	97	VALUE	\$271,000	\$142,900
BARLEY					
TOTAL ACRES	1,500	933.6	VALUE	\$300,000	\$196,100
OATS					
TOTAL ACRES	879	364.4	VALUE	\$348,120	\$127,500
WHEAT					
TOTAL ACRES	95	357	VALUE	\$22,325	\$64,300
MISCELLANEOUS					
TOTAL ACRES	26.5	8	VALUE	\$15,340	\$8,190
TOTAL					
SEED CROP PRODUCTION					
ACREAGE	2,715	1,760	VALUE	\$957,000	\$539,000



*Eurytoma
tylodermatis*

Parasitic
on the
boll weevil

N

N U R S E R Y S T O C K

Nursery stock production continued to grow, with a modest increase over 1987. Cut flowers and vegetable transplants showed the greatest increase in value.

HARVESTED CROP PRODUCTION			HARVESTED CROP VALUE		
CROP	1988	1987		1988	1987
CUT FLOWERS, GREENHOUSE PRODUCTION					
TOTAL SQ. FT.	2,538,510	2,635,152	TOTAL	\$8,405,000	\$6,665,000
WOODY ORNAMENTALS					
TOTAL ACRES	98.9	65	TOTAL	\$2,010,000	\$1,806,000
FRUIT & NUT TREES					
TOTAL ACRES	84	27.5	TOTAL	\$1,351,000	\$1,055,000
VEGETABLE TRANSPLANTS					
TOTAL ACRES	99.7	72.6	TOTAL	\$4,190,000	\$2,832,000
INDOOR DECORATIVES, GREENHOUSE PRODUCTION					
TOTAL SQ. FT.	1,075,430	1,017,080	TOTAL	\$4,056,000	\$3,524,000
CHRISTMAS TREES, CUT					
TOTAL ACRES	78.5	69.5	TOTAL	\$297,000	\$237,000
MISCELLANEOUS					
DRIED FLOWERS, HERBACEOUS PERENNIALS					
TOTAL SQ. FT. (GREENHOUSE)	85,000	85,000			
TOTAL ACRES	26	25	TOTAL	\$1,559,000	\$1,485,000
TOTAL					
NURSERY STOCK PRODUCTION					
SQ. FT. (GREENHOUSE)	\$3,698,940	\$3,737,232			
ACREAGE	387	260	VALUE	\$21,868,000	\$17,604,000

A

ANIMAL INDUSTRY

Value of the animal industry was reduced in 1988. Various fluctuations occurred within this group, with the most notable being a reduction in the value of the race, show, and investment horse industry.

COMMODITY	HARVESTED PRODUCTION		HARVESTED VALUE		
	1988	1987		1988	1987
CATTLE & CALVES					
NO. HEAD	67,500	75,000	UNIT PER UNIT TOTAL	CWT \$71	CWT \$67
TOTAL CWT	405,000	423,800		\$28,755,000	\$28,395,000
HOGS					
NO. HEAD	3,654	3,937	UNIT PER UNIT TOTAL	CWT \$53.38	CWT \$60
TOTAL CWT	7,094	8,200		\$379,000	\$492,000
HORSE, WORK & PLEASURE					
TOTAL NO. HEAD	1,800	1,700	UNIT PER UNIT TOTAL	EACH \$1,100	EACH \$1,000
				\$1,980,000	\$1,700,000
HORSE, RACE, SHOW & INVESTMENT					
TOTAL NO. HEAD	1,200	1,300	UNIT PER UNIT TOTAL	EACH \$17,000	EACH \$18,000
				\$20,400,000	\$23,400,000
SHEEP & LAMBS					
NO. HEAD	10,711	12,345	UNIT PER UNIT TOTAL	EACH \$65,000	EACH \$81,000
TOTAL CWT	11,414	12,654		\$742,000	\$1,025,000
WOOL					
TOTAL LBS	105,642	103,838	UNIT PER UNIT TOTAL	LBS \$1.55	LBS \$0.98
				\$164,000	\$102,000
MARKET MILK					
TOTAL CWT	179,682	198,500	UNIT PER UNIT TOTAL	CWT \$11.11	CWT \$11.52
				\$1,996,000	\$2,287,000
HONEY					
TOTAL LBS	100,200	131,323	UNIT PER UNIT TOTAL	LBS \$0.65	LBS \$0.68
				\$65,000	\$89,000
MISCELLANEOUS					
EGGS, POULTRY, GOATS, GAME BIRDS					
			TOTAL	\$776,000	\$2,280,000
TOTAL					
ANIMAL INDUSTRY PRODUCTION			VALUE	\$55,257,000	\$59,770,000



CENTURY OF BIO CONTROL

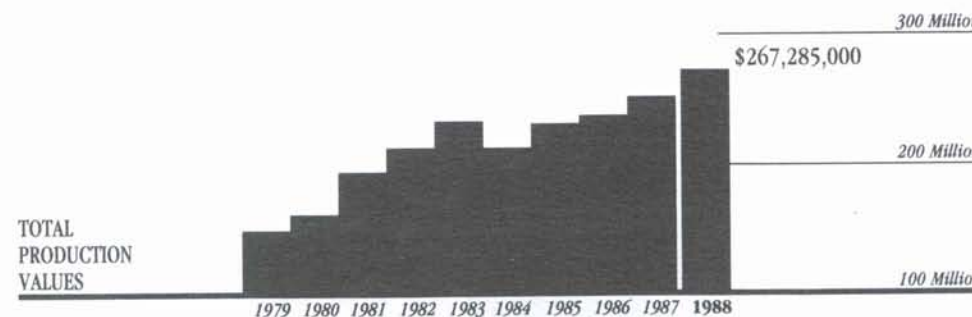
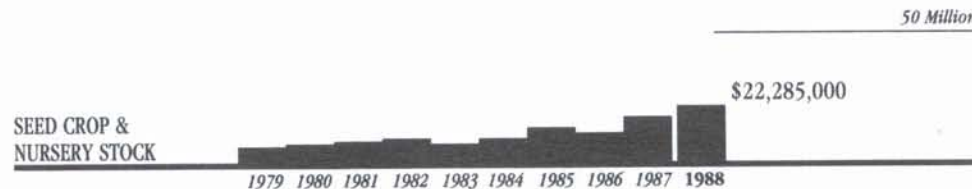
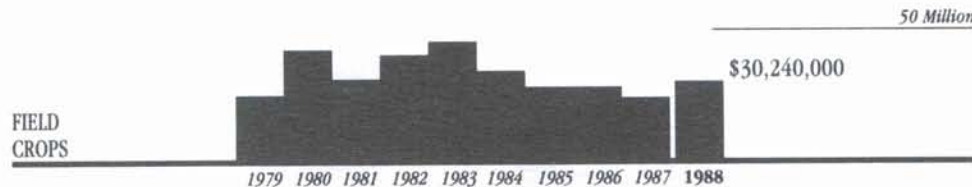
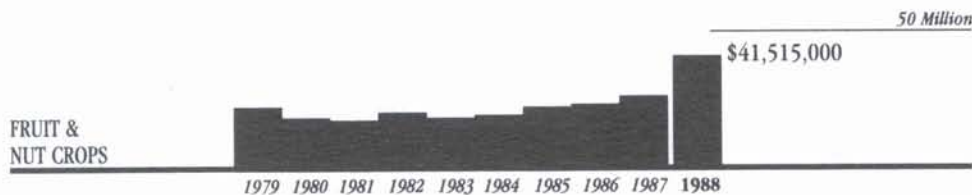
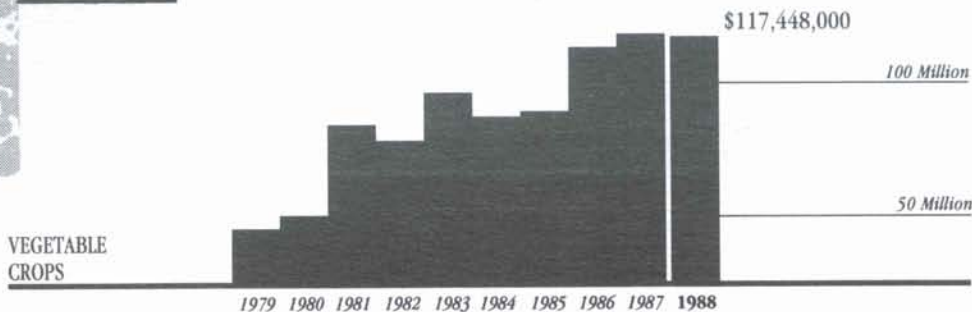
The first U.S. application of bio control occurred in California in 1889. The Australian, or vedalia beetle is a predator of cottony cushion scale – Today the vedalia beetle continues to be one of the most successful bio control applications.



Rodolia cardinalis

In Humboldt County, ranchers erected a monument in honor of the Chryslina beetle, which saved the ranchers an estimated 21 million dollars by controlling a range weed pest.

CROP & COMMODITY VALUE COMPARISON



TOP 20 CROP & COMMODITY VALUES 1988

1. Iceberg Lettuce \$28,976,000
2. Cattle & Calves \$28,755,000
3. Wine Grapes \$21,417,000
4. Race & Show Horses \$20,400,000
5. Edible Pod Peas \$17,812,000
6. Broccoli \$17,516,000
7. Barley \$9,913,000
8. Carrots \$9,677,000
9. Cut Flowers \$8,405,000
10. Celery \$8,126,000
11. Cauliflower \$7,671,000
12. Strawberries \$7,315,000
13. Grain Hay \$6,115,000
14. Chinese Vegetables \$6,108,000
15. Leaf Lettuce \$5,373,000
16. Vegetable Transplants \$4,190,000
17. Indoor Decoratives \$4,056,000
18. Bell Peppers \$4,037,000
19. Lemons \$3,958,000
20. Avocados \$3,779,000

TOTAL PRODUCTION ACREAGE

1988 **1,344,740 acres**
 1987 1,359,344 acres

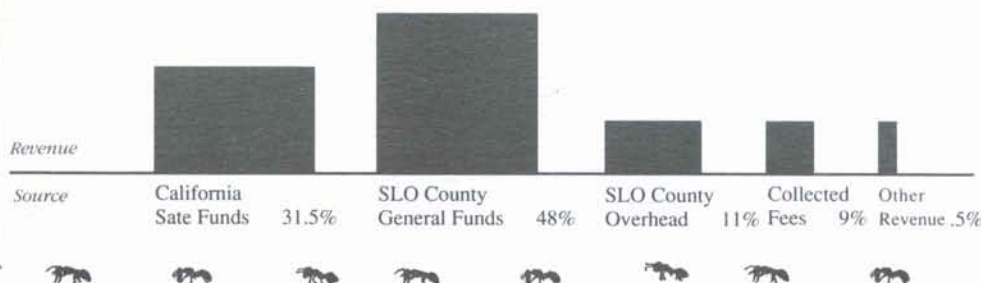


**FINANCIAL
REPORT
&
PROGRAM
REVIEW**

**FISCAL
YEAR
1987
1988**

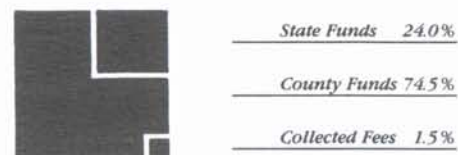
REVENUE & FUNDING SOURCES

Total Budget \$1,567,224.00



ADMINISTRATION & SPECIAL SERVICES

Program Funding \$ 448,623.00



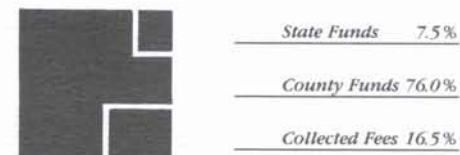
The Administrative Services staff continued to develop computerized functions for the department, which have resulted in greater efficiency in program and budget accountability. Due to specialized applications in office automation, two Intermediate Clerks were promoted to Senior level – a well-deserved promotion.

The Agricultural Commissioner's office expanded its role in emergency nuclear response by developing the *Ingestion Pathway Zone (IPZ)* preparedness plan. The IPZ protects the public from consuming potentially contaminated agricultural products and water. ■ The department's involvement in land use planning increased substantially this year. Among the recommendations made by staff were mitigation measures (such as buffering techniques) to improve the compatibility of agricultural and non-agricultural land uses.

The Agricultural Commissioner remained active with the *San Luis Obispo Pension Trust* and was also busy at the state level, helping restructure bylaws which successfully combined the *California Agricultural Commissioners* and the *California Sealers Association*. ■ Other activities included representing Measurement Standards at the state legislature to maintain funding and the coordination of a *Memorandum of Understanding* for produce labeling, developed to insure that California regulations meet those of the *National Fair Labeling Practice Act*. ■ At the national level, one of the projects undertaken was to coordinate a special committee to make recommendations concerning moisture loss of packaged grocery products for the *National Conference of Weights and Measures Officials*.

MEASUREMENT STANDARDS

Program Funding \$ 127,748.00



Measurement Standards staff (by California Law), are responsible for guaranteeing that equity prevails in all commercial transactions involving *weight, measure, count, and time*. The programs are divided into six categories:

- **Weighting devices** – examples would be grocery store and commercial truck scales.
- **Measuring devices** – include gasoline pumps and taxi meters.
- **Electric meters** – those which are not the jurisdiction of the Public Utilities Commission.
- **Compressed gasses** – such as butane and propane dispensers.
- **Quantity control** – this verifies that packaged commodities for sale contain the stated net contents.
- **Petroleum/weight master** – entails truth-in-labeling for petroleum products and the weighmaster notarizes certificates of weight and/or count whenever a buyer is not present.

The Measurement Standards staff inspected approximately 3,400 weighing and measuring devices throughout 1987/88. ■ 8,220 quantity control inspections were conducted, which amounts to 530,144 packages. ■ The staff also inspected 294 petroleum establishments and conducted 52 weighmaster inspections. ■ The year ended with 210 "Notices of Violation," and four citations were issued for violation of the law.

PRODUCT QUALITY

Program Funding \$ 71,151.00



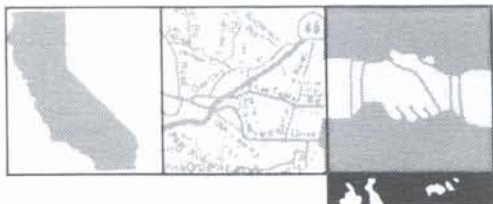
The Product Quality Program provides the consumer with the assurance of quality in the marketplace. A variety of produce and commodities are inspected throughout the year to ensure that state and federal quality standards are met. For example, lettuce is inspected for decay, insect damage, and maturity. Nursery stock is inspected for accurate labeling and the absence of pests and disease, while seed stock undergoes inspection for noxious weed contamination, quality, and proper germination requirements. In addition, eggs are examined for shell defects and signs of possible disease.

This year the agricultural staff developed a lettuce inspection communication system which has greatly improved the coordination of lettuce inspections and quality control. Throughout the year, 3,786 lettuce-growing locations were inspected, which represent over five million cartons of lettuce. ■ Of the 97 wholesale and retail nursery businesses inspected, 37 of them required follow-up by staff due to non-compliance of legal standards. ■ 11 premises that produce seed products were inspected, and approximately 38,300 dozen eggs were inspected at 24 wholesale and retail establishments.

Farmers' Markets

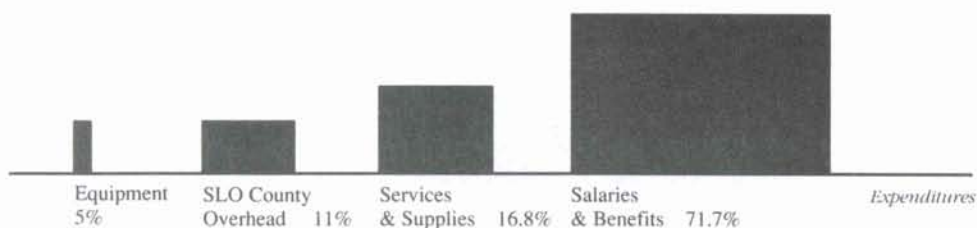
Monitoring the Farmers' Markets throughout the county and the certification of the growers who sell at these markets are also parts of the Product Quality Program. During 1987/88, 65 inspections were conducted among the nine markets which extend from Arroyo Grande to Paso Robles.

The first Farmers' Market in SLO County was initiated in 1978. Since then this popular business has grown – now generating more than one million dollars in annual sales. San Luis Obispo County continues to proudly rank second among counties in the state with its current total of Farmers' Markets.



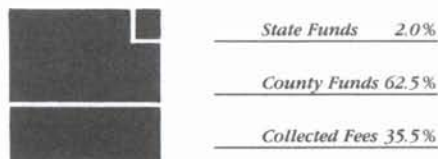
EXPENDITURES & OPERATIONAL COSTS

Total Budget \$1,567,224.00



PEST MANAGEMENT

Program Funding \$ 172,223.00



The Pest Management Program deals with weed and vertebrate (with backbone) pests that have invasive and/or destructive effects on agriculture in San Luis Obispo County. The pest management staff works closely with the Pesticide Enforcement Branch, which provides information and support necessary to ward off agricultural enemies safely and effectively. ■ This year, increased efforts were directed at alternative approaches to pest management through the use of *Biological Control* methods. *Bio Control* projects grew in number this year – from three (in 1987), to eight within the fiscal year. Current insect projects target the *woolly whitefly*, *western grapeleaf skeletonizer*, *codling moth*, and *walnut bursk fly*. Weed projects include *yellow starbistle*, *Russian thistle*, *Italian thistle*, and *puncture vine*.

The Agricultural Commissioner worked with the *California Department of Fish and Game* to develop a vertebrate pest control program which met criteria in the *Endangered Species Act*. Assistance was given to 99 property owners with possible native species habitat sites. Surveying the areas prior to treatment helped to identify and establish safeguards for any fragile wildlife thought to be present. Of the nearly 150,000 acres treated, positive results were achieved without detrimental effects.

Weed control along roads and highways within the county is to inhibit the invasion of noxious weeds onto adjacent agricultural properties. This year major emphasis was placed on controlling *yellow starbistle*. ■ State highway right-of-ways and county road right-of-ways are both represented in the 1,195 miles treated for noxious weed control this year.



PEST PREVENTION

Program Funding \$ 278,532.00



Among the goals of the Pest Prevention Program is the protection of local agriculture from the introduction of exotic (non-native) pests. In this program, three main categories coordinate the efforts of Agricultural Inspectors/Biologists: *Pest Exclusion*, *Detection*, and *Eradication*.

- *Pest exclusion* oversees the incoming and outgoing shipments of agricultural products and inspects them for the presence of quarantined pests.
- *Pest detection* mainly involves locating, maintaining, and documenting insect trapping throughout the county.
- *Pest eradication* is in response to exclusion and detection to effectively eliminate pests which have particularly destructive potential.

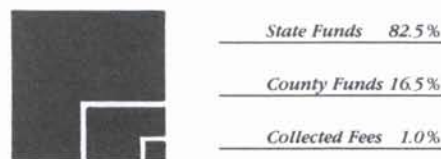
Throughout the year, 11,650 shipments coming into San Luis Obispo County were inspected; 11 were found to be infested with serious pests and 96 were rejected for quarantine violations. 592 shipments leaving the county were inspected and certified for export. ■ Detection staff placed 1,530 inspect traps, and over 35,000 visits were done to maintain them and document information. ■ Special surveys were conducted for *hydrilla* and *eucalyptus borer* throughout the county. The *woolly whitefly* prompted 2,745 backyard and retail site investigations, resulting in eradication measures at 30 locations. An additional 70 properties were treated for *purple scale*. ■ Of the 2,000 acres surveyed for noxious weeds, 39 required eradication of *skeleton weed*, *artichoke thistle*, *guara*, *oblong spurge*, *whitehorse nettle*, and/or *salsola*.

Apiary

This year six complaints were investigated (a reduction from 12 last year) for compliance with the county bee ordinance. ■ Apiary responsibilities expanded this year when the department reactivated an inspection program for serious bee diseases; 15 bee tending locations (representing 416 colonies) were inspected.

ENVIRONMENTAL PROTECTION

Program Funding \$ 282,124.00



Throughout the year, Agricultural Inspectors/Biologists conduct the *Pesticide Use Enforcement Program* as a means to ensure safe applications of pesticides. This year the regulations were expanded in the area of worker safety. Preparing to meet these new standards required that the staff participate in a number of educational seminars, which also helped to supply the community with current information.

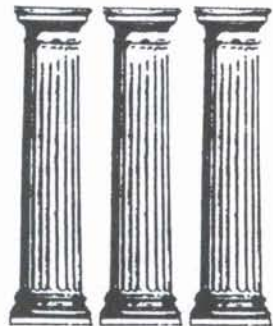
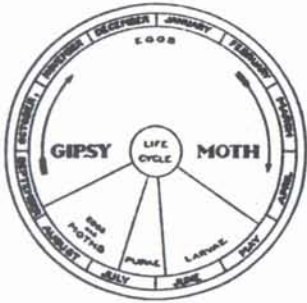
In combination with the *California Department of Food and Agriculture*, the inspection staff selects various crops for pre-harvest testing of pesticide residues. This year seven cases revealed residues that exceeded legal standards; six resulted in crop destruction.

The program requires the involvement of staff in issuing permits, as well as monitoring the activities that take place. In 1987/88 the staff reviewed 6,656 "notices of intent" to apply restricted pesticides and issued 878 permits; 60 were denied (twice the number last year). ■ Monitoring pesticide use entailed 1,330 field inspections, 130 record audits (up an additional 27 over last year), and 29 investigations for pesticide-related incidents. Nearly 500 cases required corrective measures be taken, and administrative civil penalties were assessed against two agricultural pest control companies.



To encourage safe pesticide disposal, the agricultural department fully activated a program to accept and properly dispose of household-generated pesticide waste products.





DEPARTMENT
OF
AGRICULTURE
&
MEASUREMENT STANDARDS