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California Department of Food and Agriculture

Agricultural Commissioners' Crop Reports

Marin County

1995-1999

HISTORY OF MARIN COUNTY DAIRY INDUSTRY

Historically, agriculture was the fundamental lifeblood of the local population. Marin's native people, the Coast Miwoks, lived contentedly off the land, hunting, fishing and gathering their food. Today's ranchers supply quality milk products into local, state, national and international markets.

Marin's sunny, moderate climate, much like the Mediterranean, were prized by the early European settlers. The Spanish missionaries (Mission San Raphael, 1817-1834) brought in steers from the Texas region of Mexico. These steers roamed semi-wild, wandering as far east as the Central Valley. The steers were agile in steep terrain, aggressive against predators, not easily fattened, and poor milkers. Although they were not good beef cattle, their hide and tallow, used for candles, supplied a steady demand back East.

Tallow for candles gave way to a large demand for butter, cheese and meat created by the exploding population of nearby San Francisco in response to the 1849 Gold Rush. This created a boom for good milk cows which commanded a price of \$300 to \$500 a head. Herds were gathered along the Missouri River and brought in mass overland.

Marin's pasture was known throughout the cattle industry as the country's finest. Cows grazed in fog and rainfall fed pastures nearly year round. Dairy herds were small, approximately 15-20, and all milking was done by hand. In 1867, Marin's dairy ranchers produced 1 ½ million pounds of butter or about one quarter of the state's butter supply.

Today, dairying in Marin is far from the "boom" days of the 1850's and 1860's. Marin ranchers face new challenges. Current milk and herd quality standards are extremely rigorous. Dairies require a working knowledge of genetics, nutrition, animal medicine, computer technology, farm equipment, policy analysis, finance, marketing, and human resource management. The dairy industry continues to develop herd profiles, records standards, Performance Economics and Electronic Milk Metering to help monitor and forecast milk production.

Through scientific advancement and technologies, the supplies of milk and milk byproducts is overtaking the demand, thereby reducing the price of milk, but not its production costs. With ranchers already working 12 to 14 hour days, seven days a week, the family dairy business becomes less attractive than other careers options. However, Marin dairy families strongly identify with the land and their community. Many of whom are only three or four generations removed from the early settlers. Their family history and way of life are not easily abandoned.

In recent times Marin dairies have endured pressures peculiar to living life next door to a major metropolis. They are excellent stewards of the land and make a major contribution to our local economy, producing greater than \$30 million in dairy products.



DEPARTMENT OF AGRICULTURE • WEIGHTS AND MEASURES

April 1, 1996

STACY K. CARLSEN
COMMISSIONER/DIRECTOR

ANDREA DEGRASSI
DEPUTY COMMISSIONER/DIRECTOR

Ann M. Veneman, Secretary
California Department of Food and Agriculture
and

Marin County Board of Supervisors:

Harold C. Brown, Jr., Chairman, District 2

John Kress, District 1

Gary Giacomini, District 4

Annette Rose, District 3

Harry Moore, District 5

In accordance with the provisions of Section 2279 of the California Food and Agricultural Code, I am pleased to submit the Annual Crop Report for 1995. This report is a summary of counts, acreage, yields, and gross value of agricultural production in Marin County. The report represents gross returns to the producer and does not indicate actual net profit.

The total agricultural production in 1995 was \$50,727,222. This is a 3.3% decrease from the 1994 value. The decrease is largely attributed to excessive rain and moisture which impacted livestock, field and orchard production activities.

As usual, milk was Marin's number one product, although market milk value fell due to temporary production and quality problems caused by the severe storms in January and March. Fruit and vegetable production suffered a substantial decrease due to flooding and a decreased growing season. Livestock value was down by \$2.7 million due largely to lower market prices for cattle sold. Nursery products dropped 45% in value because of cut backs in production. High production costs, availability of a reliable water supply and market prices have made business difficult for some larger nursery producers. A large value gain was recorded from silage production due to a three fold increase in crop acreage.

Aquaculture values nearly doubled to over \$4 million with the addition of the category of Herring and Trout to the aquaculture commodities. Oyster values increased despite continued problems with oyster juvenile seed mortality and harvest closures of Tomales Bay during the heavy storms. Lamb values increased with higher lamb production and market prices.

I wish to thank all of the individuals and organizations for their cooperation in providing the information required for this report. I wish to especially thank Andrea deGrassi, Deputy Agricultural Commissioner, Anita Sauber, Agricultural/Weights and Measures Inspector II, and Jan Warren, Senior Secretary for compiling and producing the document.

Respectfully submitted,

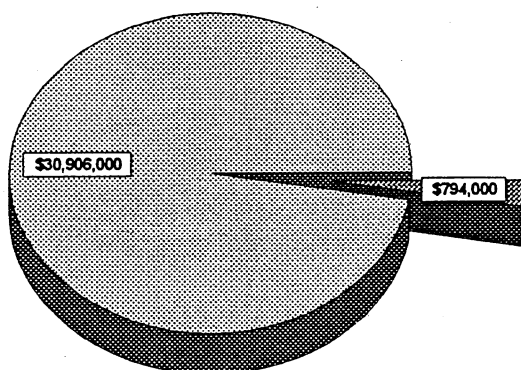
Stacy K. Carlsen
Agricultural Commissioner

FIELD, FRUIT, NUT & VEGETABLE CROPS

	YEAR	HARVESTED ACREAGE	TOTAL UNITS	DOLLAR VALUE	
				PER UNIT	TOTAL
Hay	1994	2,785	6,141	73.54	\$451,615.00
	1995	3,396	7,187	57.71	\$414,811.00
Silage	1994	905	9,920	22.84	\$226,593.00
	1995	3,067	32,820	15.16	\$497,787.00
Pasture, Irrigated	1994	820		110.0	\$90,200.00
	1995	820		110.0	\$90,200.00
Pasture, Other	1994	154,000		29.00	\$4,466,000.00
	1995	154,000		29.00	\$4,466,000.00
Fruits, Nuts & Vegetables	1994	142			\$1,691,366.00
	1995	199			\$1,090,080.00
TOTAL	1994	158,652			\$6,925,774.00
	1995	161,482			\$6,558,878.00

LIVESTOCK PRODUCTS				
			DOLLAR VALUE	
ITEM	YEAR	PROD. UNIT	PER UNIT	TOTAL
Milk: Market	1994	2,619,401 Cwt	12.08	\$31,635,000.00
	1995	2,503,612 Cwt	12.34	\$30,906,000.00
Milk:Manufact.	1994	29,902 Cwt	10.12	\$303,000.00
	1995	72,171 Cwt	11.01	\$794,000.00
Wool	1994	66,394 Lbs	.51	\$34,115.00
	1995	55,124 Lbs	.68	\$38,537.00
Mohair	1994	N/A	N/A	N/A
	1995	1,144 Lbs	2.88	\$3,299.00
TOTAL	1994			\$31,972,115.00
	1995			\$31,741,836.00

MILK PRODUCTION VALUES



■ MILK: MARKET

■ MILK:MANUFACTURING

LIVESTOCK AND POULTRY			
ITEM	YEAR	NO. OF HEAD	DOLLAR VALUE TOTAL
Cattle	1994	20,528	\$7,070,616.00
	1995	16,452	\$4,567,637.00
Lambs	1994	8,069	\$554,521.00
	1995	9,963	\$741,777.00
Poultry and Eggs: Hatching	1994		\$2,783,708.00
	1995		\$2,425,856.00
TOTAL	1994		\$10,408,845.00
	1995		\$7,735,270.00

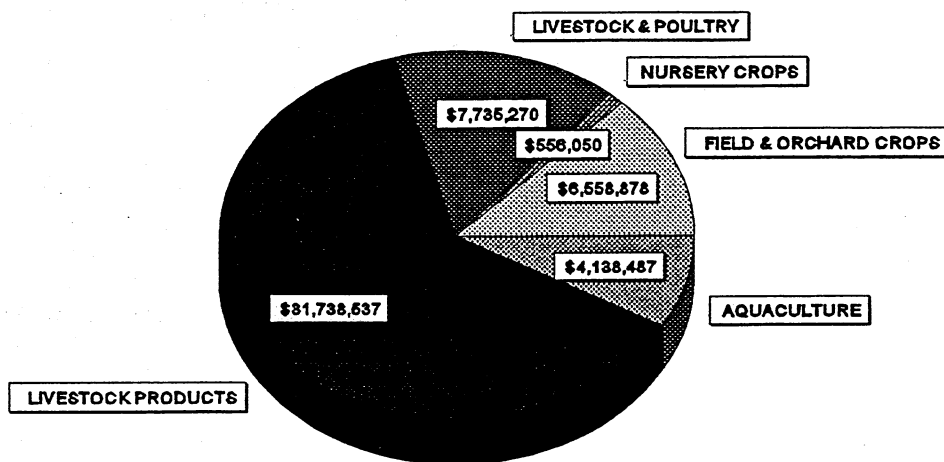
INVENTORIES OF LIVESTOCK & POULTRY		
ITEM	January 1, 1995	January 1, 1996
All Cattle	44,000	44,000
Dairy Cows	13,500	13,500
Beef Cows	10,000	10,000
Stock Sheep	11,400	11,400
Poultry	407,843	431,782

NURSERY PRODUCTS				
		PRODUCTION AREA		TOTAL
		HOUSE SQUARE FT	FIELD AREAS	
ITEM	YEAR			
NURSERY	1994	235,000	54.75	\$1,000,317
	1995	224,000	50.50	\$556,050

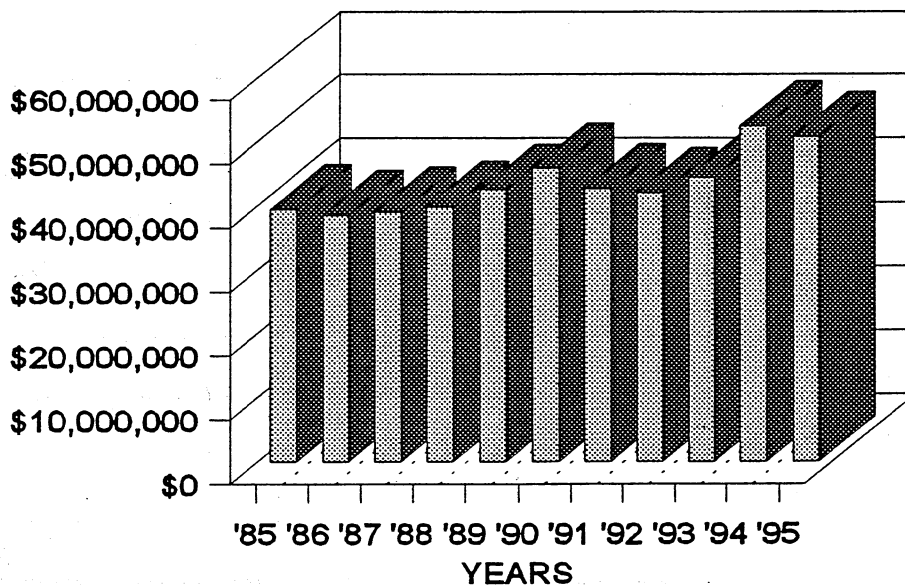
AQUACULTURE PRODUCTS			
	YEAR	PRODUCTION ACREAGE	DOLLAR VALUE
Oysters, Clams, Mussels, Abalone	1994	1,295	\$2,139,980.00
	1995	1,295	\$2,733,487.00
Herring, Trout	1994	N/A	N/A
	1995	N/A	\$1,405,000.00
TOTAL	1994		\$2,139,980.00
	1995		\$4,138,487.00

COMPILATION		
	1994	1995
Field & Orchard Crops	\$6,925,774.00	\$6,558,878.00
Nursery Crops	\$1,000,317.00	\$556,050.00
Livestock & Poultry	\$10,408,845.00	\$7,735,270.00
Livestock Products	\$31,972,115.00	\$31,738,537.00
Aquaculture Products	\$2,139,980.00	\$4,138,487.00
TOTAL	\$52,447,031.00	\$50,727,222.00

1995 COMPILATION



AGRICULTURAL PRODUCTION GROSS VALUE TEN YEAR SUMMARY



SUMMARY OF THE SUSTAINABLE AGRICULTURAL ACTIVITIES

BIOLOGICAL CONTROL

Biological pest control is the use of natural enemies to help suppress pest populations to acceptable levels. Once the agent becomes established, control is self perpetuating, potentially reducing the need to use pesticides.

PEST

Gorse
Bull Thistle
Yellow Star Thistle
Scotch Broom
Ash White Fly
Italian Thistle
Puncture Vine
Kalamath Weed
Canada Thistle
Plumeless Thistle

BIOLOGICAL AGENT/MECHANISM

Gorse Mite, Seed Weevil
Bull Thistle Gall Fly
Seed Head Weevil, Gall Fly, Hairy Weevil
Seed Weevil, Stem Boring Moth
Parasitic Wasp
Seed Weevil
Seed Weevil
Beetle
Mechanical removal
Mechanical removal

PEST PREVENTION

Pest prevention is the systematic search for injurious pests before they have become established to help prevent costly and environmentally disruptive eradication programs.

Exclusion

5,427 shipments of incoming plant material inspected at UPS, Federal Express, Postal and delivery trucks.
62 shipments placed under quarantine for violation of plant quarantine laws.

Detection

726 exotic pest traps are placed in Marin County as front line to detect pests such as Medfly, Japanese Beetle, and Gypsy Moth.

ORGANIC FOOD PRODUCTION

Organic farming emphasizes a greater cooperation with nature without reliance on synthetic chemical inputs. All organic producers register in their principal county of operation.

Organic commodities produced in Marin County included: Beans, berries, broccoli, cabbage, carrots, chard, cucumbers, garlic, herbs, leaf lettuce, mixed salad greens, onions, parsley, potatoes, spinach, squash, tomatoes, turnips, and watercress. Organic dairy products included: Milk, cheese, butter, yogurt, and whipping cream.

There are 24 registered organic producers in Marin County farming 124 acres, producing a total gross value of 2.4 million dollars.

1995

**ANNUAL CROP REPORT
COUNTY OF MARIN**

*Agricultural Commissioner
Director of Weights and Measures*
STACY K. CARLSEN

*Deputy Agricultural Commissioner
Deputy Director of Weights and Measures*
ANDREA DE GRASSI

Agricultural/Weights and Measures Inspectors
**ALBERT POWELL
LOU SIAN
ANITA SAUBER
CHARLES HSU**

Senior Secretary
JAN WARREN

Departmental Mission Statement

Our mission is to serve the public's interest by insuring equity in the market place, promoting and protecting agriculture, protecting environmental quality and health and welfare of Marin County's citizens.

This document is available in alternative format upon request.

History of Marin County Aquaculture Industry

The Marin oyster industry is an interesting example of man's adapting an otherwise unproductive part of the landscape to his benefit. The efforts to raise exotic oyster species on barren, tidal mud flats along a coast where there is no native oyster stock of commercial value have met with both success and failure, and the industry has been marked by wide fluctuations in activity over its one hundred year history. While oysters are the major aquaculture commodity being produced, Tomales Bay growers also produce mussels, clams, and abalone commercially.

Tomales Bay is a 15 mile-long, mile-wide drowned rift valley on the San Andreas Fault, a trough between the Point Reyes Peninsula and the undulating hills that are mostly used for grazing dairy cattle to the east. Another major growing location is in Drakes Estero located on the west side of Point Reyes Peninsula. This area is used for dairy cattle and sheep grazing and is part of the Point Reyes National Seashore.

Oysters have been grown commercially on the Tomales Bay since late in the last century, especially after pollution closed down shellfish harvesting in San Francisco Bay some fifty years ago. Oysters were first planted in Tomales Bay in 1875, the year the Northwestern Pacific Railroad linked it with Sausalito which had a good ferry service to San Francisco. Daily communication was maintained between Tomales Bay and San Francisco from 1875 to 1930, the period during which the railroad operated. Road development and the advancement of the trucking industry opened up San Francisco as one of the biggest seafood markets in the United States.

Tomales Bay and Drakes Estero oyster companies sell directly to the consumer and to various Bay area wholesale seafood dealers. The fresh packed oysters are trucked to San Francisco by the producer and delivered to the wholesalers, who in turn distribute them to retail dealers, and restaurants in the San Francisco Bay area. Restaurants' demands for fresh local foodstuffs have created a boom for the oyster grower. People from all parts of the Bay area drive many miles over a narrow winding road to buy oysters from the beds. Weekend tourists and sportsmen are also customers. The strong consumer desire for absolutely fresh shellfish is the principal explanation for the success of this marketing arrangement.

Marin is the state's second-largest shellfish producing area and growers are gearing up for expansion to grow more oysters, clams, mussels and abalone. Tomales growers have managed to carve out a niche for themselves, largely because the bay's water is clean and its watershed is being protected and restored. However, an isolated incident of water contamination caused by domestic pollutants and fluctuation in bay salinity during heavy winter rainfall plagued growers this past year. Only because local residents and officials have successfully worked to protect and restore their watershed is the Tomales Bay shellfish industry alive and well today. The 223 square mile Tomales Bay watershed drains into one of the least despoiled major coastal bays in California. Today, two-thirds of the Tomales Bay watershed remains in agricultural use.

Cover Photo: Maturing oysters in trays resting on mud flats awaiting the returning tides in Tomales Bay.



DEPARTMENT OF AGRICULTURE • WEIGHTS AND MEASURES

April 1, 1997

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In accordance with the provisions of Section 2279 of the California Food and Agricultural Code, I am pleased to submit the Annual Crop Report for 1996. This report is a summary of counts, acreage, yields, and gross value of agricultural production in Marin County. The report represents gross returns to the producer and does not indicate actual net profit.

Marin County agriculture recovered nicely in spite of yet another year of harsh winter and spring storms. The value of all agricultural production rose to a record \$56,409,423. The increase is due to greater production, new producers, and better market prices.

Milk was Marin's number one product, with production increasing 5% and the value increasing an impressive 18.9%. Fruit and vegetable production increased with the addition of a number of new small growers of fruits and vegetables who sell their crops at local farmers markets. Livestock value was up by \$5.9 million due to increased production and market prices for cattle, sheep and poultry; poultry provided the greatest boost in value. Nursery products increased over last year because some areas were able to resume production. However, business remains tenuous due to high production costs, unreliable water supplies, and poor market prices. A large value gain was seen again this year in silage production, due to increases in crop acreage and in the value/price per ton.

Aquaculture value dropped due to problems in production and to a change in what products are included in the definition. To be in line with the California Fish and Game definition of aquaculture, the herring production value was removed and placed in a new category "Commercial Fishing." Aquaculture's oyster values decreased due to continued problems with juvenile seed mortality and harvest closures of Tomales Bay during the heavy storms.

I wish to thank all of the individuals and organizations for their cooperation in providing the information required for this report.

Respectfully submitted,

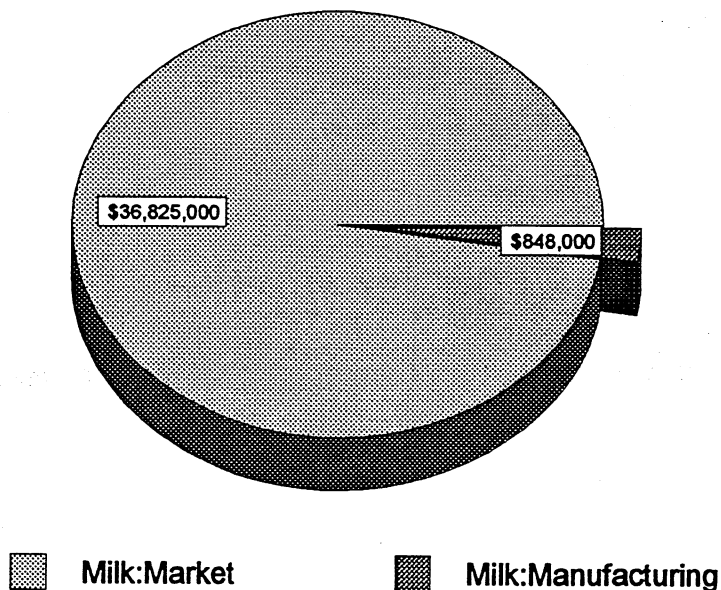
Stacy K. Carlsen
Agricultural Commissioner

FIELD, FRUIT, NUT & VEGETABLE CROPS

	YEAR	HARVESTED ACREAGE	TOTAL UNITS	DOLLAR VALUE	
				PER UNIT	TOTAL
Hay	1995	3,396	7,187	57.71	\$414,811.00
	1996	2,929	6,502	58.89	\$382,870.00
Silage	1995	3,067	32,820	15.16	\$497,787.00
	1996	2,721	33,134	24.86	\$823,573.00
Pasture, Irrigated	1995	820		110.0	\$90,200.00
	1996	820		110.0	\$90,200.00
Pasture, Other	1995	154,000		29.00	\$4,466,000.00
	1996	154,000		29.00	\$4,466,000.00
Fruits, Nuts & Vegetables	1995	199			\$1,090,080.00
	1996	320			\$1,334,013.00
TOTAL	1995	161,482			\$6,558,878.00
	1996	160,790			\$7,096,656.00

LIVESTOCK PRODUCTS				
			DOLLAR VALUE	
ITEM	YEAR	PROD. UNIT	PER UNIT	TOTAL
Milk: Market	1995	2,503,612 Cwt	12.34	\$30,906,000.00
	1996	2,581,377 Cwt	14.27	\$36,825,000.00
Milk:Manufact.	1995	72,171 Cwt	11.01	\$794,000.00
	1996	64,806 Cwt	13.09	\$848,000.00
Wool	1995	55,124 Lbs	.68	\$38,537.00
	1996	82,080Lbs	.65	\$53,352.00
Mohair	1995	1,144 Lbs	2.88	\$3,299.00
	1996	Not avail	Not avail	Not avail
TOTAL	1995			\$31,741,836.00
	1996			\$37,726,352.00

MILK PRODUCTION VALUES



LIVESTOCK AND POULTRY			
ITEM	YEAR	NO. OF HEAD	DOLLAR VALUE TOTAL
Cattle	1995	16,452	\$4,567,637.00
	1996	16,371	\$4,551,616.00
Lambs	1995	9,963	\$741,777.00
	1996	11,016	\$1,029,217.00
Poultry and Eggs: Hatching	1995		\$2,425,856.00
	1996		\$2,950,910.00
TOTAL	1995		\$7,735,270.00
	1996		\$8,531,743.00

INVENTORIES OF LIVESTOCK & POULTRY		
ITEM	January 1, 1996	January 1, 1997
All Cattle	44,000	44,407
Dairy Cows	13,500	13,486
Beef Cows	10,000	11,000
Stock Sheep	11,400	10,260
Poultry	431,782	455,624

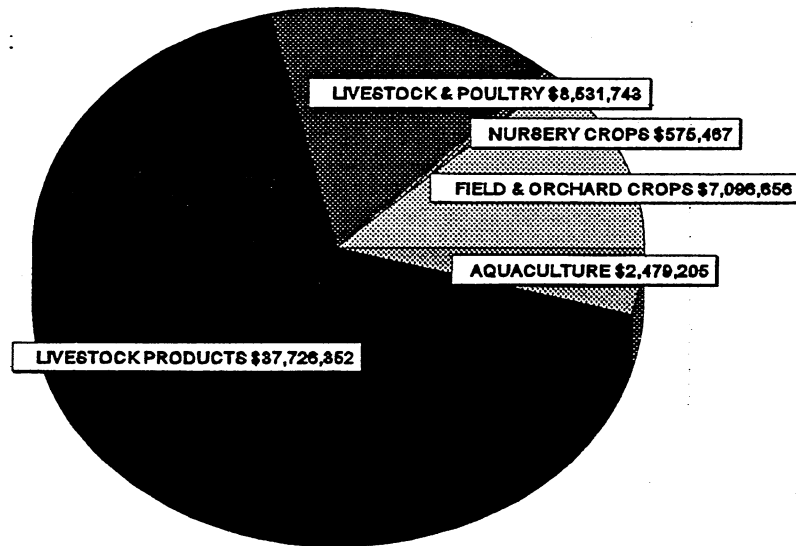
NURSERY PRODUCTS				
		PRODUCTION AREA		TOTAL
		HOUSE SQUARE FT	FIELD AREAS	
ITEM	YEAR			
NURSERY	1995	224,000	50.50	\$556,050
	1996	217,800	44.00	\$575,467

AQUACULTURE/COMMERCIAL FISHING PRODUCTS			
	YEAR	PRODUCTION ACREAGE	DOLLAR VALUE
Aquaculture:			
Oysters, Clams, Mussels, Abalone	1995	1,295	\$2,733,487.00
	1996		\$2,479,205.00
Commercial Fishing:			
Herring, Trout	1995	N/A	\$1,405,000.00
	1996	N/A	\$5,000,600.00
TOTAL	1995		\$4,138,487.00
	1996		\$2,479,205.00*

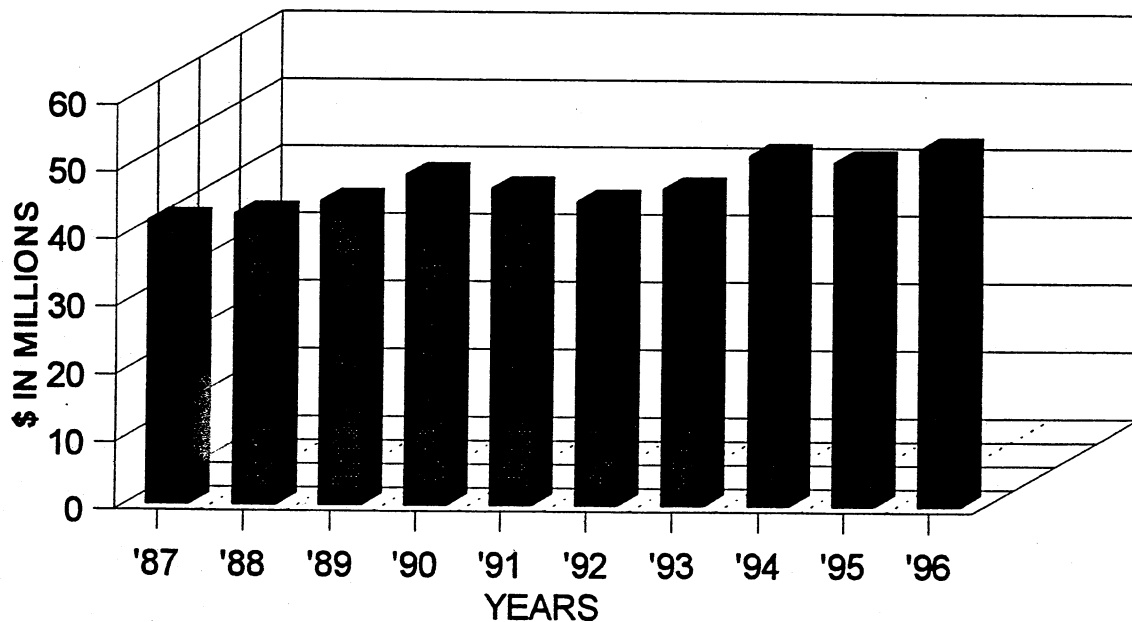
*Total for 1996 does not include herring due to revision in definition for aquaculture

COMPILATION		
	1995	1996
Field & Orchard Crops	\$6,558,878.00	\$7,096,656.00
Nursery Crops	\$556,050.00	\$575,467.00
Livestock & Poultry	\$7,735,270.00	\$8,531,743.00
Livestock Products	\$31,738,537.00	\$37,726,352.00
Aquaculture Products	\$4,138,487.00	\$2,479,205.00
TOTAL	\$50,727,222.00	\$56,409,423.00

1996 COMPILATION



AGRICULTURAL PRODUCTION GROSS VALUE TEN YEAR SUMMARY



SUMMARY OF THE SUSTAINABLE AGRICULTURAL ACTIVITIES

ORGANIC FOOD PRODUCTION

Organic farming emphasizes a greater cooperation with nature without reliance on synthetic chemical inputs. All organic producers register in their principal county of operation.

Organic commodities produced in Marin County included: Beans, berries, broccoli, cabbage, carrots, chard, cucumbers, cut flowers, garlic, herbs, leaf lettuce, mixed salad greens, oat hay, onions, parsley, potatoes, silage, spinach, sprouts, squash, tomatoes, turnips, vegetable starts and watercress. Organic dairy products included: Milk, cheese, butter, yogurt, and whipping cream.

There are 28 registered organic producers in Marin County farming 184 acres, producing a total gross value of 3.3 million dollars.

BIOLOGICAL CONTROL

Biological pest control is the use of natural enemies to help suppress pest populations to acceptable levels. Once the agent becomes established, control is self perpetuating, potentially reducing the need to use pesticides.

PEST

Gorse
Bull Thistle
Yellow Star Thistle
Scotch Broom
Ash White Fly
Italian Thistle
Puncture Vine
Kalamath Weed
Canada Thistle
Plumeless Thistle

BIOLOGICAL AGENT/MECHANISM

Gorse Mite, Seed Weevil
Bull Thistle Gall Fly
Seed Head Weevil, Gall Fly, Hairy Weevil, Peacock Fly
Seed Weevil, Stem Boring Moth
Parasitic Wasp
Seed Weevil
Seed Weevil
Beetle
Mechanical removal
Mechanical removal

PEST PREVENTION

Pest prevention is the systematic search for injurious pests before they have become established to help prevent costly and environmentally disruptive eradication programs.

Exclusion

4,365 shipments of incoming plant material inspected at UPS, Federal Express, Postal and delivery trucks.
65 shipments placed under quarantine for violation of plant quarantine laws.

Detection

714 exotic pest traps are placed in Marin County as front line to detect pests such as Medfly, Japanese Beetle, and Gypsy Moth.

1996

**ANNUAL CROP REPORT
COUNTY OF MARIN**

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Departmental Mission Statement

Our mission is to serve the public's interest by ensuring equity in the market place, promoting and protecting agriculture, protecting environmental quality and health and welfare of Marin County's citizens.

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*...before we plow an unfamiliar path
It is well to be informed about the winds,
About the variations in the sky,
The native traits and habits of the place,
What each locale permits, and what denies.
-Virgil*

*They're making people
everyday, but they ain't
makin' any more dirt.
-Will Rodgers*

ORGANIC AGRICULTURE

What is organic agriculture? It is an ecological approach to farming that promotes and enhances biodiversity, biological cycles and soil biological activity. It is based on the minimal use of man-made products and emphasizes farming practices that are sustainable and ecology sound.

"Organic" is a labeling term that denotes products produced under the authority of the Organic Foods Production Act. Organic agricultural methods are used to minimize pollution from air, soil, and water. Organic food handlers, processors and retailers adhere to standards that maintain the integrity of organic agricultural products.

In 1990 the California Organic Food Act was revised and added an enforcement component to the existing state laws. Each County Agricultural Commissioner now enforce these laws with their respective producers, handlers and retailers. The act also requires all organic producers and handlers to be registered with their home Agricultural Commissioner's office.

Marin County currently has 29 registered organic farms which vary in size from 1/4 acre to 220 acres. There are 312 acres of organically farmed land yielding a total gross value of 3.1 million dollars. Organic farming uses agricultural techniques that enable farmers to grow an array of crops in a small area of land. The diversity of fresh organic products in Marin include gourmet salad mixes, herbs, tomatoes, potatoes, pumpkins, wheatgrass, sprouts, watercress, vegetable seedlings, cut flowers and dairy products.

Small is not bad! Although organic farming accounts for a small fraction of the agricultural production in Marin, local consumers have a variety of choices on where to purchase these organic products. These include local farmer's markets, world class restaurants, retail and natural foods grocery stores and Community Supported Agriculture (CSA). A CSA is a system where community members subscribe for farm products on a seasonal basis. Each week members receive a share of the farmer's harvest.

Marin County organic production has found a distinct and supportive organic marketing niche with local and Bay area consumers. These dedicated producers have laid the ground work for continued creative niche marketing as well as promoting a sustainable method of farming for future generations.

Cover Photo: Spinach seedlings emerging through fertile organic soil in West Marin.



DEPARTMENT OF AGRICULTURE • WEIGHTS AND MEASURES

April 1, 1998

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Despite heavy January rains Marin's agricultural production value for 1997 rose to \$57,338,984, a 1.6% increase over 1996.

Milk, Marin's top commodity, had a 3% increase in production, but saw a \$1,768,333 (4.7%) decrease in value. The drop in milk price received corresponds to the reduction in the minimum farm milk prices set by the California Department of Food and Agriculture. The minimum price is that minimum that processors must pay to purchase milk from farms. The price set reflects the supply and demand conditions of the dairy industry.

The biggest change in 1997 was \$3,122,663, a 68.6% increase in Livestock value. This growth was due to a 40% increase in the number of cattle sold and significantly better market prices over 1996. Hay and silage production values increased due to greater harvested acreage and to a recent introduction of hay for seed. Aquaculture fared better in 1997, though it was still plagued with the problems of past years, but to a lesser degree. Value increased by over 21%.

The value of fruit, nut and vegetable production fell by 2.7% due to fewer acres planted. Nursery products fell by 4.9% due to further cuts in production. Marin's only cut flower rose producer shut down the remainder of its rose production after a long struggle with foreign competition and rising costs. Poultry dropped by \$710,302, a 24% decrease, due in large part to lower prices received for turkey breeding eggs and some drop in production.

My appreciation goes to all of the individuals and organizations for their cooperation in providing the information for this report.

Respectfully submitted,

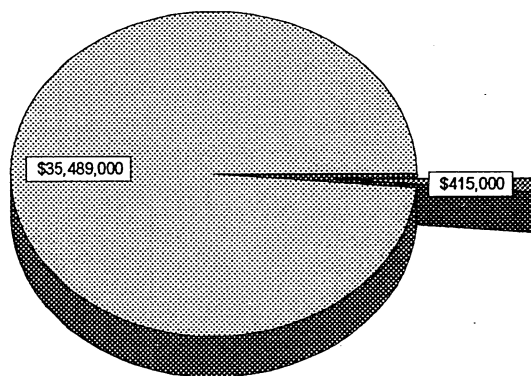
Stacy K. Carlsen
Agricultural Commissioner

FIELD, FRUIT, NUT & VEGETABLE CROPS

	YEAR	HARVESTED ACREAGE	TOTAL UNITS	DOLLAR VALUE	
				PER UNIT	TOTAL
Hay, Other	1996	2,929	6,502	58.89	\$382,870.00
Hay, Grass Hay, Oats	1997	1,547	2,509	75.60	\$189,681.00
		1,823	3,181	92.81	\$295,235.00
Silage	1996	2,721	33,134	24.86	\$823,573.00
	1997	3,349	31,706	22.80	\$723,099.00
Hay, Grain	1997	485	261	408.64	\$106,656.00
Pasture, Irrigated	1996	820		110.00	\$90,200.00
	1997	824		101.00	\$83,224.00
Pasture, Other	1996	154,000		29.00	\$4,466,000.00
	1997	154,000		29.00	\$4,466,000.00
Fruits, Nuts & Vegetables	1996	320			\$1,334,013.00
	1997	234			\$1,298,370.00
TOTAL	1996	160,790			\$7,096,656.00
	1997	162,262			\$7,162,265.00

LIVESTOCK PRODUCTS				
			DOLLAR VALUE	
ITEM	YEAR	PROD. UNIT	PER UNIT	TOTAL
Milk: Market	1996	2,581,377 Cwt	14.27	\$36,825,000.00
	1997	2,692,365 Cwt	13.18	\$35,489,000.00
Milk:Manufact.	1996	64,806 Cwt	13.09	\$848,000.00
	1997	35,368 Cwt	11.74	\$415,000.00
Wool	1996	82,080 Lbs	.65	\$53,352.00
	1997	83,106 Lbs	.65	\$54,019.00
TOTAL	1996			\$37,726,352.00
	1997			\$35,958,019.00

MILK PRODUCTION VALUES



■ MILK: MARKET

■ MILK:MANUFACTURING

LIVESTOCK AND POULTRY			
ITEM	YEAR	NO. OF HEAD	DOLLAR VALUE TOTAL
Cattle	1996	16,371	\$4,551,616.00
	1997	22,951	\$7,674,279.00
Lambs	1996	11,016	\$1,029,217.00
	1997	8,837	\$749,201.00
Poultry and Eggs: Hatching	1996		\$2,950,910.00
	1997		\$2,240,608.00
TOTAL	1996		\$8,531,743.00
	1997		\$10,664,088.00

INVENTORIES OF LIVESTOCK & POULTRY		
ITEM	January 1, 1997	January 1, 1998
All Cattle	44,407	44,053
Dairy Cows	13,486	13,100
Beef Cows	11,000	11,550
Stock Sheep	10,260	9,234
Poultry	455,624	120,908

NURSERY PRODUCTS				
		PRODUCTION AREA		TOTAL
		HOUSE SQUARE FT	FIELD AREAS	
ITEM	YEAR			
Nursery	1996	217,800	44.00	\$575,467
	1997	159,300	39.75	\$547,182

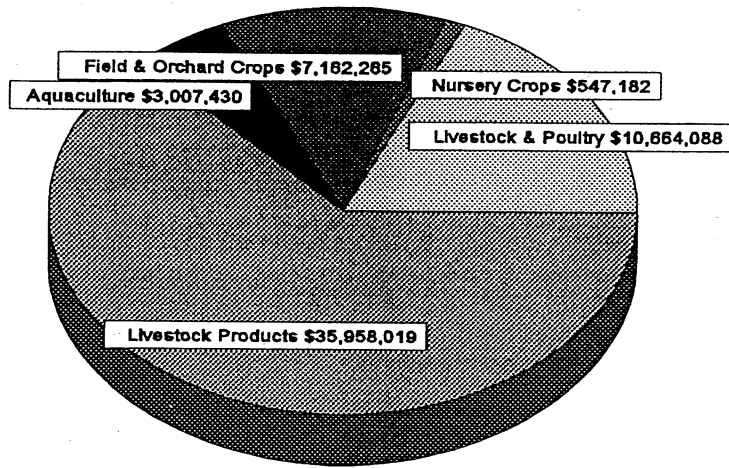
AQUACULTURE PRODUCTS			
	YEAR	PRODUCTION ACREAGE	DOLLAR VALUE
Oysters, Clams, Mussels, Abalone	1996	1,295	\$2,479,205.00
	1997	1,545	\$3,007,430.00

COMMERCIAL FISHING			
	YEAR	PRODUCTION ACREAGE	DOLLAR VALUE
Herring, Trout	1996	N/A	\$5,000,600.00
	1997	N/A	\$2,000,000.00

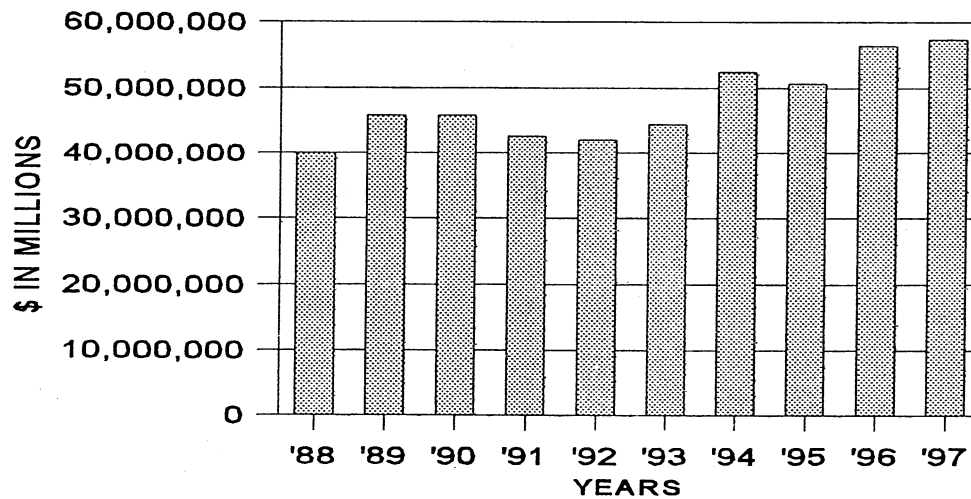
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COMPILATION		
	1996	1997
Field & Orchard Crops	\$7,096,656.00	\$7,162,265.00
Nursery Crops	\$575,467.00	\$547,182.00
Livestock & Poultry	\$8,531,743.00	\$10,664,088.00
Livestock Products	\$37,726,352.00	\$35,958,019.00
Aquaculture Products	\$2,479,205.00	\$3,007,430.00
TOTAL	\$56,409,423.00	\$57,338,984.00

1997 COMPILATION



AGRICULTURAL PRODUCTION GROSS VALUE TEN YEAR SUMMARY



SUMMARY OF THE SUSTAINABLE AGRICULTURAL ACTIVITIES

ORGANIC FOOD PRODUCTION

Organic farming emphasizes a greater cooperation with nature without reliance on synthetic chemical inputs. All organic producers register in their principal county of operation.

Organic commodities produced in Marin County included: Apples, beans, berries, broccoli, cabbage, carrots, chard, cucumbers, cut flowers, garlic, herbs, leaf lettuce, mixed salad greens, onions, parsley, potatoes, pumpkins, silage, spinach, sprouts, squash, tomatoes, turnips, vegetable starts and watercress. Organic dairy products included: Milk, cheese, butter, yogurt, whipping cream and buttermilk.

There are 29 registered organic producers in Marin County farming 312 acres, producing a total gross value of 3.1 million dollars.

BIOLOGICAL CONTROL

Biological pest control is the use of natural enemies to help suppress pest populations to acceptable levels. Once the agent becomes established, control is self perpetuating, potentially reducing the need to use pesticides.

PEST

Gorse
Bull Thistle
Yellow Star Thistle
Scotch Broom
Ash White Fly
Italian Thistle
Puncture Vine
Kalamath Weed
Canada Thistle
Plumeless Thistle

BIOLOGICAL AGENT/MECHANISM

Gorse Mite, Seed Weevil
Bull Thistle Gall Fly
Seed Head Weevil, Gall Fly, Hairy Weevil, Peacock Fly
Seed Weevil, Stem Boring Moth
Parasitic Wasp
Seed Weevil
Seed Weevil
Beetle
Mechanical removal
Mechanical removal

PEST PREVENTION

Pest prevention is the systematic search for injurious pests before they have become established to help prevent costly and environmentally disruptive eradication programs.

Exclusion

4,052 shipments of incoming plant material inspected at UPS, Federal Express, Postal and delivery trucks.
80 shipments placed under quarantine for violation of plant quarantine laws.

Detection

751 exotic pest traps are placed in Marin County as front line to detect pests such as Medfly, Japanese Beetle, and Gypsy Moth.

DEPARTMENT STAFF

Agricultural Commissioner/Director of Weights and Measures

Stacy K. Carlsen

Deputy Agricultural Commissioner/Deputy Director of Weights and Measures

Andrea deGrassi

Agricultural/Weights and Measures Inspectors

Albert Powell

Anita Sauber

Charles Hsu

Laurel Thomassin

Senior Secretary

Jan Warren

Departmental Mission Statement

Our mission is to serve the public's interest by ensuring equity in the market place, promoting and protecting agriculture, protecting environmental quality and health and welfare of Marin County's citizens.

This document is available in alternative format upon request.

SHEEP PRODUCTION IN MARIN COUNTY

Marin County sheep production is an example of an agricultural industry that has evolved and adapted over many years. In the mid to latter parts of the 19th century, the high hopes of striking it rich in the gold mines were fading. Settlers liked what they saw when they came to California, and they didn't want to leave this beautiful land. Some of the first crops grown in Marin County by settlers were potatoes and barley, which remained strong crops for years. There was, however, a drop in demand for potato and barley crops, as well as changes in modes of transportation in the early 1900s, which in turn created a heightened interest for livestock agriculture consisting mainly of beef, sheep, dairy, and some poultry production. Family history and experience with various livestock, topography of the land, and soil type helped influence what kind of livestock a family raised.

Sheep production was usually done in conjunction with other ranching enterprises even though ranchers initially thought that beef and sheep were not compatible. Chicken producers always had a few sheep around to "keep the grass down around the barns".

Dairy production in Marin County had grown successful over the years, however, not every ranch had the topography to suit dairy production. More and more it was noticed that Marin land was well suited for sheep. Sheep production didn't require flat land for a dairy barn and didn't require as much water as dairy production.

Marin's shallow soils, steepness of canyons, and the fact that cattle were harder on the land paved the way for the expansion of the sheep industry in the 1950s as other livestock industries were fading. Essentially, sheep ranching evolved from other agricultural businesses that didn't make it. Production of sheep was a niche that didn't require a large capital investment and the hilly topography of Marin was better suited to sheep grazing. However, the high rainfall in the area does not make it the most efficient climate for wool production. Marin County climate is more suitable for meat production.

In the 1950s when poultry production declined due to the inability of the small poultry ranches to compete with the bigger operations, sheep production increased. Changes in sanitation regulations greatly affected the dairy industry around this time as well. Sheep production allowed a rancher to do something with their land when there were few options available. As a result, there arose a greater interest in cattle and sheep ranching.

The 1950s - 1960s brought advances in pasture improvement. Research was improving the diet of sheep and beef and improving pasture management which allowed ranchers to intensify production.

Sheep ranching peaked in the late 1950s with estimates of over 100,000 head in Marin County. Small local butchers and numerous livestock auction facilities made the sheep industry lucrative. There was a market for small operators to sell, and it was the same with the wool buyers.

Over the years, however, the animal processing industries became more specialized. Small operations were closing down because they couldn't keep up with the bigger facilities due to modernization. The number of market outlets has decreased over the years. The introduction of polyester and other man-made fibers, as well as standard-issue military clothing switching to man-made fibers, has significantly reduced wool production. Woolen mills have moved, relocated and specialized. Both wool and meat are being imported from Australia and New Zealand. The 1970s brought the beginnings of coyote depredation in Marin County, adding to the decline in sheep numbers.

Today, Marin County has approximately 10,000 sheep, yielding a gross production value in excess of \$580,000. Niche marketing carries the biggest potential for growth, specifically organic wool and meat production. From its humble beginnings in the early 1900s, the Marin County sheep industry has survived highs and lows, utilizing the tried and true methods of the past, while combining the technology of today.



DEPARTMENT OF AGRICULTURE • WEIGHTS AND MEASURES

April 1, 1999

William J. Lyons, Jr., Secretary
California Department of Food and Agriculture
and

Marin County Board of Supervisors

Annette Rose, President, District 3

John Kress, District 1

Steve Kinsey, District 4

Harold C. Brown, District 2

Cynthia Murray, District 5

STACY K. CARLSEN
COMMISSIONER/DIRECTOR

ANDREA DeGRASSI
DEPUTY COMMISSIONER/DIRECTOR

In accordance with the provisions of Section 2279 of the California Food and Agricultural Code, I am pleased to submit the Annual Crop Report for 1998. This report is a summary of counts, acreage, yields, and gross value of agricultural production in Marin County. The 1998 gross value of all production was \$56,166,946. The report represents gross returns to the producer and does not indicate actual net profit.

The weather played a significant role yet again in determining the overall value and the shifts in production for agriculture in Marin during 1998.

Milk is the long standing, premier crop for Marin, and this year accounts for over 69% of the crop report's total value. Milk had an 8.9% decrease in production from 1997, as production was likely affected by the rains that were responsible for disaster declaration in 35 of 58 counties. However, milk saw a 7.6% or \$2.7 million increase in value. The increase in value is due to higher milk prices for the farmers brought on by an unusually high demand from cheese makers. Milk prices received by farmers increased 18% per hundred weight of market milk.

Livestock value fell by \$2.8 million as prices received dropped significantly from last year's exceptionally good market prices. Production also decreased. Poultry value went up 21% as prices and production increased.

Aquaculture had a dramatic 48% drop in value last year as it experienced production and harvest problems. Juvenile oyster mortality resulted in big production losses. State health and water quality agencies also banned harvesting for a time until water quality issues in Tomales Bay were addressed.

The value of fruit and vegetable production went down by 18.8% due largely to the five inches of rain in May that delayed plantings of vegetable and hay crops and reduced yields. Despite an overall county decline in the industry, nursery crops saw a better year with the addition of two new production sites and better market prices.

My appreciation goes to all of the individuals and organizations for their cooperation in providing the information for this report.

Respectfully submitted,

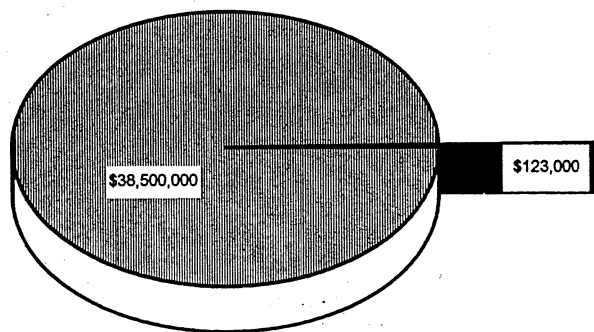
Stacy K. Carlsen
Agricultural Commissioner

FIELD, FRUIT & VEGETABLE CROPS

ITEM	YEAR	HARVESTED ACREAGE	TOTAL UNITS	DOLLAR VALUE	
				PER UNIT	TOTAL
Hay, Grass	1997	1,547	2,509	75.60	\$189,681
		1,823	3,181	92.81	\$295,235
	1998	1,992	4,507	54.81	\$247,050
		1,400	1,885	65.38	\$123,250
Silage	1997	3,349	31,706	22.80	\$723,099
	1998	2,918	35,184	27.71	\$975,035
Hay, Grain	1997	485	261	408.64	\$106,656
	1998	20	15	140.00	\$2,100
Pasture, Irrigated	1997	824		101.00	\$83,224
	1998	800		100.00	\$82,000
Pasture, Other	1997	154,000		29.00	\$4,466,000
	1998	154,000		29.00	\$4,466,000
Fruits & Vegetables	1997	234			\$1,298,370
	1998	247			\$1,053,270
TOTAL	1997	162,262			\$7,162,265
	1998	161,377			\$6,948,705

LIVESTOCK PRODUCTS				
			DOLLAR VALUE	
ITEM	YEAR	PROD. UNIT	PER UNIT	TOTAL
Milk: Market	1997	2,692,365 Cwt	13.18	\$35,489,000
	1998	2,477,310 Cwt	15.54	\$38,500,000
Milk:Manufact.	1997	35,368 Cwt	11.74	\$415,000
	1998	7,899 Cwt	15.62	\$123,000
Wool	1997	83,106 Lbs	.65	\$54,019
	1998	71,258 Lbs	.45	\$32,066
TOTAL	1997			\$35,958,019
	1998			\$38,655,066

MILK PRODUCTION VALUES



MILK: MARKET
 MILK: MANUFACTURING

LIVESTOCK AND POULTRY			
ITEM	YEAR	NO. OF HEAD	DOLLAR VALUE TOTAL
Cattle	1997	22,951	\$7,674,279
	1998	17,881	\$5,039,604
Lambs	1997	8,837	\$749,201
	1998	7,044	\$580,819
Poultry and Eggs: Hatching	1997		\$2,240,608
	1998		\$2,710,498
TOTAL	1997		\$10,664,088
	1998		\$8,330,921

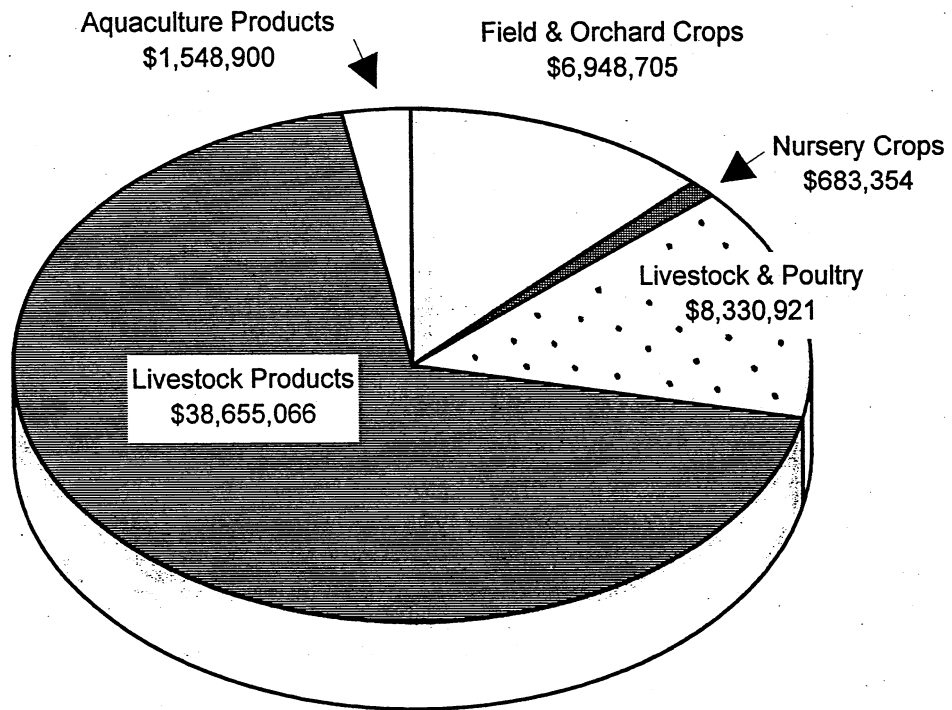
INVENTORIES OF LIVESTOCK & POULTRY		
ITEM	January 1, 1998	January 1, 1999
All Cattle	44,053	43,142
Dairy Cows	13,100	12,600
Beef Cows	11,550	12,128
Stock Sheep	9,234	8,772
Poultry	120,908	119,662

NURSERY PRODUCTS				
		PRODUCTION AREA		TOTAL
		HOUSE SQUARE FT	FIELD AREAS	
ITEM	YEAR			
Nursery	1997	159,300	39.75	\$547,182
	1998	90,800	44.13	\$683,354

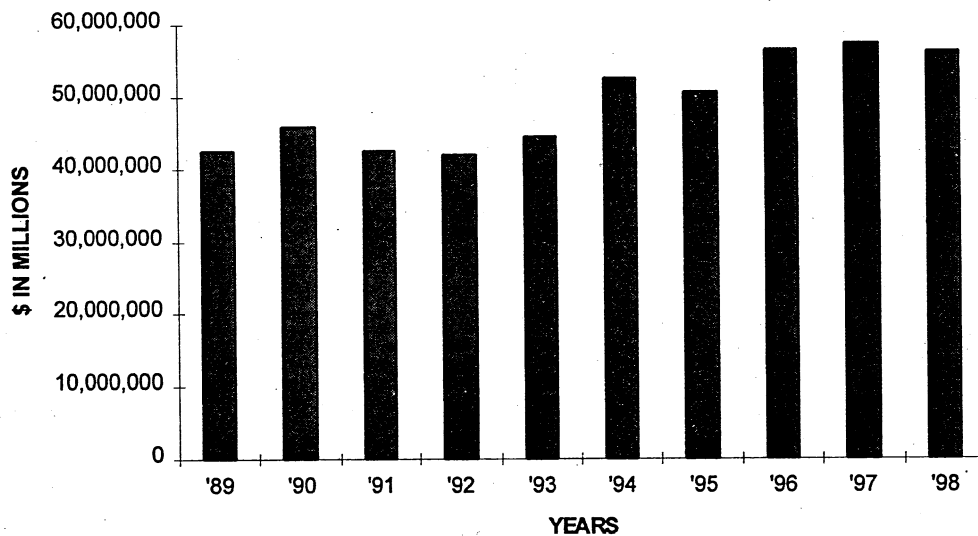
AQUACULTURE PRODUCTS			
	YEAR	PRODUCTION ACREAGE	DOLLAR VALUE
Oysters, Clams, Mussels, Abalone	1997	1,545	\$3,007,430
	1998	1,287	\$1,548,900

COMPILATION		
	1997	1998
Field & Orchard Crops	\$7,162,265	\$6,948,705
Nursery Crops	\$547,182	\$683,354
Livestock & Poultry	\$10,664,088	\$8,330,921
Livestock Products	\$35,958,019	\$38,655,066
Aquaculture Products	\$3,007,430	\$1,548,900
TOTAL	\$57,338,984	\$56,166,946

1998 COMPILATION



AGRICULTURAL PRODUCTION GROSS VALUE TEN YEAR SUMMARY



SUMMARY OF THE SUSTAINABLE AGRICULTURAL ACTIVITIES

ORGANIC FOOD PRODUCTION

Organic farming emphasizes a greater cooperation with nature without reliance on synthetic chemical inputs. All organic producers register in their principal county of operation.

Organic commodities produced in Marin County included: Apples, beans, berries, broccoli, cabbage, carrots, chard, cucumbers, cut flowers, garlic, herbs, leaf lettuce, mixed salad greens, olives, onions, pears, potatoes, pumpkins, silage, spinach, sprouts, squash, tomatoes, turnips, vegetable starts and watercress. Organic dairy products included: Milk, cheese, butter, yogurt, whipping cream and buttermilk.

There are 28 registered organic producers in Marin County farming 385 acres, producing a total gross value of 3.2 million dollars.

BIOLOGICAL CONTROL

Biological pest control is the use of natural enemies to help suppress pest populations to acceptable levels. Once the agent becomes established, control is self perpetuating, potentially reducing the need to use pesticides.

PEST

Gorse
Bull Thistle
Yellow Star Thistle
Scotch Broom
Ash White Fly
Italian Thistle
Puncture Vine
Kalamath Weed
Canada Thistle
Plumeless Thistle

BIOLOGICAL AGENT/MECHANISM

Gorse Mite, Seed Weevil
Bull Thistle Gall Fly
Seed Head Weevil, Gall Fly, Hairy Weevil, Peacock Fly
Seed Weevil, Stem Boring Moth
Parasitic Wasp
Seed Weevil
Seed Weevil
Beetle
Mechanical and chemical removal
Mechanical and chemical removal

PEST PREVENTION

Pest prevention is the systematic search for injurious pests before they have become established to help prevent costly and environmentally disruptive eradication programs.

Exclusion

3,803 shipments of incoming plant material inspected at UPS, Federal Express, Postal and delivery trucks.
167 shipments placed under quarantine for violation of plant quarantine laws, up due to Balsam Fir Gall Midge - "B" rated.

Detection

1,148 exotic pest traps are placed in Marin County as front line to detect pests such as Medfly, Japanese Beetle, and Gypsy Moth. (Medfly find (July 14, 1998) caused about 500 extra traps to be placed.)

DEPARTMENT STAFF

Agricultural Commissioner/Director of Weights and Measures

Stacy K. Carlsen

Deputy Agricultural Commissioner/Deputy Director of Weights and Measures

Andrea deGrassi

Agricultural/Weights and Measures Inspectors

Albert Powell

Anita Sauber

Charles Hsu

Laurel Thomassin

Senior Secretary

Joanne Van Cleave

Sr. Clerk/Typist

Linda Carlson

Departmental Mission Statement

Our mission is to serve the public's interest by ensuring equity in the market place, promoting and protecting agriculture, protecting environmental quality and health and welfare of Marin County's citizens.

This document is available in alternative format upon request.

Table of Contents

Letter to the Secretary / Board of Supervisors	2
Summary of Production	3
Agricultural Production Gross Value – A Ten Year Summary	4
Livestock, Poultry, and Aquaculture	5
Livestock Products	5
Inventories of Livestock and Poultry	6
Field, Fruit and Vegetable Crops	7
Nursery Products	8
Department Programs	9
Summary of Sustainable Agriculture	11
Pest Prevention Program	12
Farmers Markets of Marin County	13
Department Staff	14

This year's Livestock and Agricultural Crop Report has been upgraded and reformatted to be an easier-to-read publication. Some changes include: the separation of wine grapes from fruit and vegetable totals, inclusion of calf and lamb numbers in number of head totals, use of state formulas for calculating total number of livestock head, and improvements in design, editing, and composition.

April 1, 2000

William J. Lyons, Jr., Secretary
California Department of Food and Agriculture
And
Marin County Board of Supervisors
Steve Kinsey, President, District 4

John Kress,	District 1	Annette Rose,	District 3
Harold C. Brown,	District 2	Cynthia Murray,	District 5

In accordance with the provisions of Section 2279 of the California Food and Agricultural Code, I am pleased to submit the Annual Crop Report for 1999. This report is a summary of counts, acreage, yields, and gross value of agricultural production in Marin County. The 1999 gross value of all production was \$53,541,559. The report represents gross returns to the producer and does not indicate actual net profit.

The weather played a significant role yet again in determining the overall value and the shifts in production for agriculture in Marin during 1999.

Milk is the long standing, premier crop for Marin, and this year accounts for over 63% of the crop report's total value. Milk had a 4% decrease in production from 1998, as production was affected by a 5% decrease in the number of dairy cows. However, milk saw a 13% or \$4.7 million decrease in value. The decrease in value is due to lower milk prices paid to the farmers. Milk prices received by farmers decreased 9% per hundred weight of market milk.

Livestock value increased by \$709,213 as prices received increased from last year's market prices. Production also increased. Poultry value went down 8%, however, production increased 2%.

Aquaculture experienced a 9% drop in value last year as it experienced production and harvest problems. Juvenile oyster mortality once again resulted in production losses.

The value of fruit and vegetable production, including wine grapes, went up by 12%, due to an increase of 20 production acres. Despite an overall county decline in nursery acreage, nursery crops saw better market prices, resulting in a 4% increase in value.

My appreciation goes to all of the individuals and organizations for their cooperation in providing the information for this report.

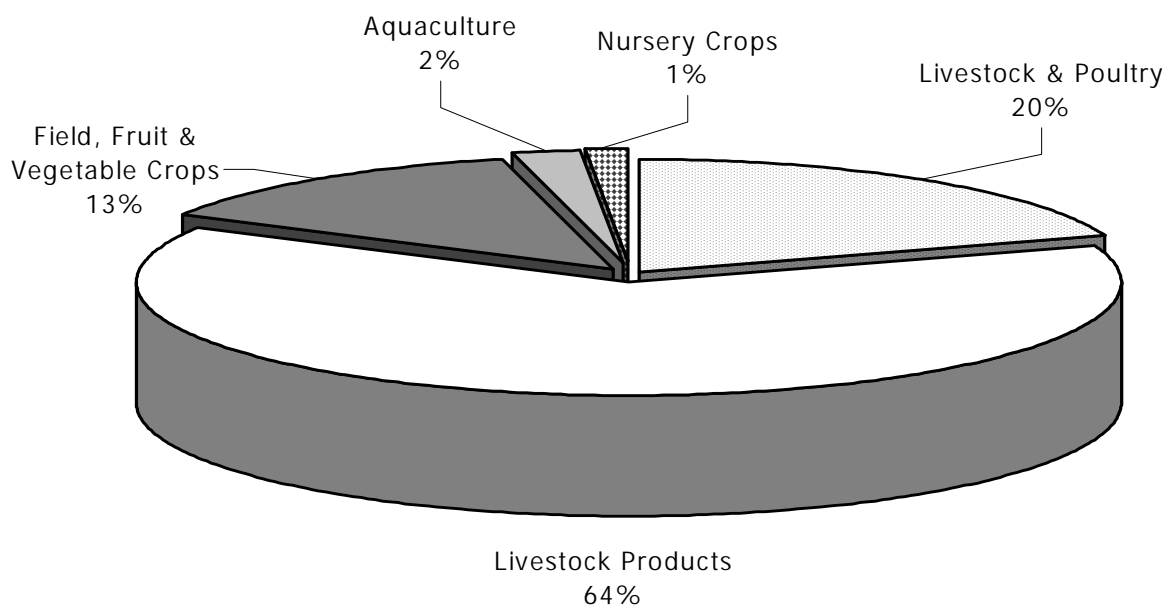
Respectfully submitted,

Stacy K. Carlsen
Agricultural Commissioner

Summary of Production

	<u>1999</u>	<u>1998</u>
Livestock Products	\$ 33,906,850	\$ 38,655,066
Livestock & Poultry	\$ 10,490,826	\$ 9,982,767
Field, Fruit & Vegetable Crops	\$ 7,170,412	\$ 6,948,674
Aquaculture	\$ 1,266,019	\$ 1,548,900
Nursery Crops	\$ 707,452	\$ 683,354
TOTAL	\$ 53,541,559	\$ 57,818,761

1999 Production Summary



Livestock, Poultry and Aquaculture

Item	Year	No. of Head	Live Weight	Unit	Dollar Value	
					\$/Unit	Total
Cattle & Calves	1999	20,514	123,571	cwt	\$ 60.39	\$ 7,462,255
	1998	20,074	119,317	cwt	\$ 57.03	\$ 6,805,134
Sheep & Lambs	1999	7,496	8,096	cwt	\$ 64.13	\$ 519,227
	1998	6,701	7,237	cwt	\$ 64.54	\$ 467,135
Poultry & Eggs*	1999	121,468				\$ 2,509,344
	1998	119,662				\$ 2,710,498
Aquaculture	1999		Oysters, Mussels, & Clams			\$ 1,266,019
	1998		Oysters, Mussels, & Clams			\$ 1,548,900
Total	1999					\$ 11,756,845
	**1998					\$ 11,531,667

* parent stock hatching eggs

** revised: all 1998 dollar values now include price of adult animals



Livestock Products

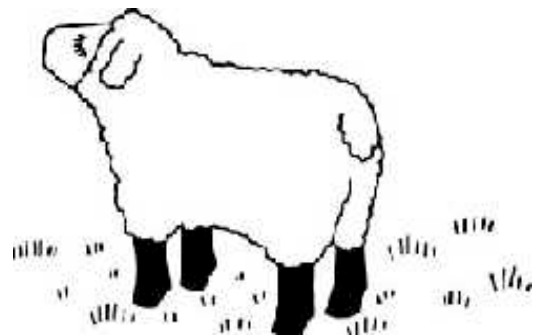
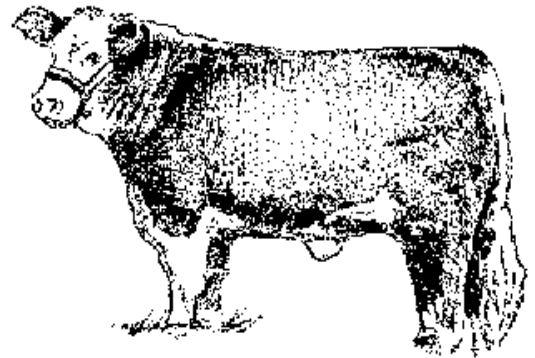
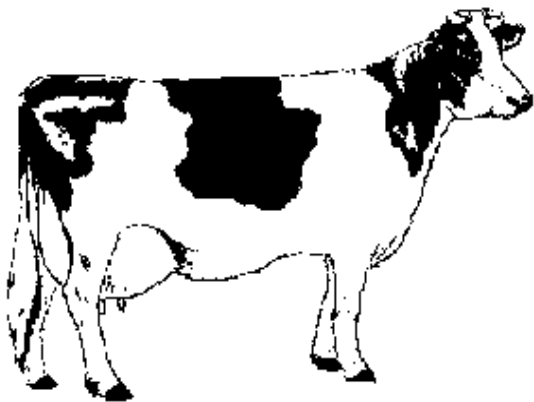


Item	Year	Production	Unit	Dollar Value	
				\$/Unit	Total
Milk (Market)	1999	2,391,343	cwt	\$ 14.14	\$ 33,814,000
	1998	2,477,310	cwt	\$ 15.54	\$ 38,500,000
Milk (Manufacturing)	1999	4,945	cwt	\$ 13.05	\$ 65,000
	1998	7,899	cwt	\$ 15.62	\$ 123,000
Wool	1999	139,248	lbs	\$ 0.20	\$ 27,850
	1998	71,258	lbs	\$ 0.45	\$ 32,066
Total	1999				\$ 33,906,850
	1998				\$ 38,655,066

Inventories of Livestock and Poultry

(Number of Head as of January 1, 2000)

ITEM	NUMBER
Cattle and Calves, all	43,457
Milk cows and heifers 2 years and over	11,900
Beef cows and heifers 2 years and over	13,340
Sheep and Lambs, all	17,406
Poultry	121,468



Field, Fruit and Vegetable Crops

Item	Year	Harvested Acreage	Ton/ Acre	Total Tons	Unit	Dollar Value	
						\$/Unit	Total
Hay, Grass	1999	1,985	2.28	4,525	ton	\$ 48.75	\$ 220,593
	1998	1,992	2.26	4,507	ton	\$ 54.81	\$ 247,028
Hay, Oat	1999	1,534	1.62	2,485	ton	\$ 60.00	\$ 149,100
	1998	1,400	1.35	1,885	ton	\$ 65.38	\$ 123,241
Silage	1999	2,574	14	36,036	ton	\$ 29.00	\$ 1,045,044
	1998	2,918	12	35,184	ton	\$ 27.71	\$ 975,035
Hay, Grain	1999	160	.75	120	ton	\$ 220.00	\$ 26,400
	1998	20	.75	15	ton	\$ 140.00	\$ 2,100
Pasture, Irrigated	1999	810				\$ 100.00	\$ 81,000
	1998	800				\$ 102.50	\$ 82,000
Pasture, Other	1999	154,000				\$ 29.00	\$ 4,466,000
	1998	154,000				\$ 29.00	\$ 4,466,000
Fruits & Vegetables	1999	176					\$ 882,275
	1998	247					\$ 1,053,270
Grapes, Wine*	1999	91		154.5	ton		\$ 300,000
	1998		(\$ value included in fruit and vegetable totals)				
Total	1999						\$ 7,170,412
	1998						\$ 6,948,674

* Varieties include: Chardonnay, Pinot Noir, Merlot, Cabernet Sauvignon, and Cabernet Franc



Nursery Products

Item	Year	Production Acres	Dollar Value Total
Nursery	1999	40.00	\$ 707,452
Stock, All	1998	46.00	\$ 683,354



Marin County Department of Agriculture/Weights & Measures

Departmental Mission Statement

Our mission is to serve the public's interest by ensuring equity in the market place, promoting and protecting agriculture, protecting environmental quality and health and welfare of Marin County's citizens.

Following is a description of the department's activities:

Pest Prevention

Pest prevention encompasses several activities aimed to prevent the introduction and spread of pests in Marin County. Pest exclusion focuses on preventing the entry and establishment of exotic pests and limiting the intrastate movement of newly discovered pests. Marin County inspectors monitor all avenues of pest entry into the county. Pest detection is the systematic search for pests outside of a known infested area. The goal is to find infestations of harmful exotic pests before eradication becomes biologically or economically not feasible.

Protection of the Environment

Over the years Marin County has developed a program of Pesticide Use Enforcement that includes all the facets that are needed to comply with Federal and State laws and to ensure proper, safe, and efficient use of pest control methods and pesticides essential for the production of food and fiber and for the protection of public health, safety and welfare, and the environment. This is accomplished by permitting and monitoring the use of pesticides, investigating pesticide incidents and complaints, continuous enforcement of pesticide use and records associated with that use, collecting and reviewing of pesticide use data, and educating and assisting users of pesticides.

Integrated Pest Management

Integrated pest management (IPM) is a common-sense approach to pest management that uses a variety of methods to control pests. Pesticides may be part of an IPM program, however, considerable effort is also put towards preventing pest problems by controlling conditions which may attract and support pests. Marin County's IPM program is designed to ensure that County departments and everyone applying pesticides to property owned and/or managed by the County of Marin utilize IPM practices, eliminate or reduce pesticide applications to the maximum extent feasible and take all reasonable measures to ensure that long-term prevention or suppression of pest problems has minimal negative impact on human health, non-target organisms, and the environment. The goal of the County is to

reduce its countywide total yearly pesticide use by 75% by weight, as compared to the total pesticide use in 1997, no later than January 1, 2004.

The Marin County Agricultural Commissioner's Office is also in the process of creating an IPM program for schools. This program is being established to develop pest management systems for the purpose of reducing risk to human health and the environment for activities associated with pest control.

Product Quality

Marin County inspectors are protecting consumers by inspecting agricultural products for compliance with laws and regulations, and ensuring that businesses are afforded a fair and equitable opportunity to market their products. Inspections are conducted at plant nurseries, Farmers Markets, and organic farms, as well as eggs being sold at wholesale and retail outlets.

Weights and Measures

The Weights and Measures program protects the interests of the buyer and seller to ensure honesty and integrity of everyday business transactions when products are sold by weight, measure, count or time. This protection is accomplished through our continuous and systematic inspection of all equipment that weighs or measures a commodity that is sold. Weights and Measures inspectors test taximeters, scales in stores, gasoline pumps, fabric and cordage meters, electric meters, water meters, livestock and animal scales, vehicle scales, scanner systems for pricing accuracy, and packaged products for stated net contents. Every transaction involving the exchange of goods, property, and service is affected in a very vital way by some form of weights and measures.



Summary of the Sustainable Agricultural Activities

Sustainability is a method of using resources in ways that meet our own needs without compromising the ability of future generations to meet their own needs. The three “Es” of sustainability are the Environment, social Equity, and the Economy.

Biological Control

Biological pest control is the use of natural enemies to help suppress pest populations to acceptable levels. Once the agent becomes established, control is self perpetuating, potentially reducing the need to use pesticides.

Pest

Gorse
Bull Thistle
Yellow Star Thistle
Scotch Broom
Ash White Fly
Italian Thistle
Puncture Vine
Purple Star Thistle
Klamath Weed
Canada Thistle
Plumeless Thistle

Biological Agent/Mechanism

Gorse Mite, Seed Weevil
Bull Thistle Gall Fly
Seed Head Weevil, Gall Fly, Hairy Weevil, Peacock Fly
Seed Weevil, Stem Boring Moth
Parasitic Wasp
Seed Weevil
Seed Weevil
Seed Weevil
Beetle
Mechanical and chemical removal
Mechanical and chemical removal



Organic Food Production

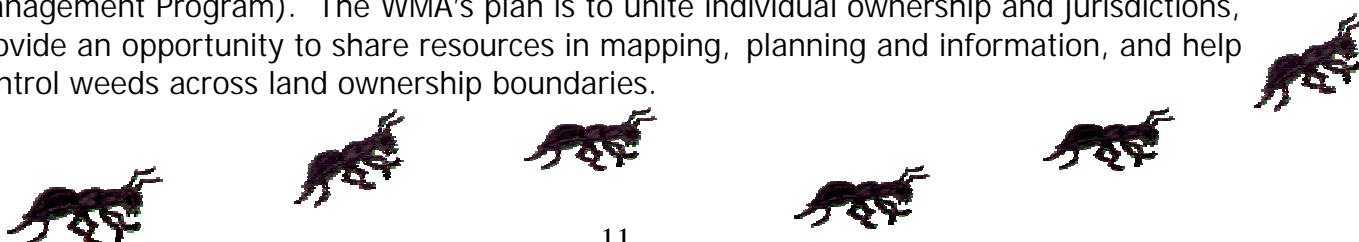
Organic farming emphasizes a greater cooperation with nature without reliance on synthetic chemical inputs. All organic producers register in their principal county of operation.

Organic commodities produced in Marin County include: apples, beans, berries, broccoli, cabbage, carrots, chard, cucumbers, cut flowers, dairy products, garlic, herbs, leaf lettuce, milk, mixed salad greens, olives, onions, pears, potatoes, pumpkins, silage, spinach, sprouts, squash, tomatoes, turnips, vegetable starts, and watercress.

There are 26 registered organic producers in Marin County farming 396 acres, producing a total gross value of 3.4 million dollars.

Weed Management

A Weed Management Area (WMA) Committee was formed for Marin and Southern Sonoma Watersheds when the California State Legislature passed AB1168 (Noxious Weeds Management Program). The WMA's plan is to unite individual ownership and jurisdictions, provide an opportunity to share resources in mapping, planning and information, and help control weeds across land ownership boundaries.



Pest Exclusion

In 1999, Marin County personnel conducted 4,970 incoming plant quarantine inspections. Plant shipments were monitored at Federal Express, UPS, nurseries, ethnic markets, aquatic supply stores, and marble/tile/slate stores (inspection of foreign wooden crates and pallets for wood boring insects). In addition, 46 gypsy moth inspections of household goods from eastern states were conducted.

449 rejections of plant material were made. Rejected plant material was either destroyed or reconditioned and released. The number of rejections increased significantly from 1998 due to the Balsam Fir Gall Midge complex and the new high risk inspection program.

A total of 83 pests were intercepted. Of those, 27 were "A" or "Q" rated, and 35 were "B" rated, and 21 were "C" or "D" rated. The following is a list of the significant pest interceptions:

Scientific Name	Common Name	Rating
Anoplolepis longipes	A Long Legged Ant	Q
Bupleurum lancifolium	Thoroughwax	Q
Chrysodeixis eriosoma	Green Garden Looper	A
Dasineura balsamicola	Balsam Fir Gall Midge Complex	B
Elytrigia repens	Quackgrass	B
Entyloma oryzae	Rice Smut	A
Fulgoridae species	A Plant Hopper	Q
Malacosoma species	A Tent Caterpillar	Q
Pheidole megacephala	Big Headed Ant	Q
Rhyparochromus saturnius	A leggard Bug	Q
Salvinia auriculata complex	Giant Salvinia	Q
Siphauta acuta	Torpedo bug eggs	B
Solenopsis species	An Ant	Q
Technomyrmex albipes	White Footed Ant	Q

Q – rating: Serious – Quarantine Action

A – rating: Serious – State Action

B – rating: Serious – County Action

Pest Detection

1,100 traps were serviced for exotic insect pests (including Mediterranean and Oriental Fruit Flies, Olive Fruit Fly, Khapra Beetle, Gypsy Moth, and Japanese Beetle). Of the 1,100 traps, 222 CHAMP traps were in service in April and May for the Medfly find on July 14, 1998.



Farmers Markets of Marin County

The purpose of Farmers Markets are to allow local producers to sell their certified commodities direct to the public. Currently, there are 28 certified producers that have been issued certificates in Marin County. The following 9 Farmers Markets have been certified by the Agricultural Commissioner to market local produce in Marin County.

Civic Center Farmers Market

Civic Center, San Rafael

Thursdays – 8:00 am – 1:00 pm

Sundays – 8:00 am – 1:00 pm

Open All Year

Downtown San Rafael Farmers Mrk

Fourth St., San Rafael

Thursdays – 6:00 pm – 9:00 pm

May – September

Old Town Novato Farmers Market

Down Town, Novato

Tuesdays – 4:00 pm – 8:00 pm

May - December

West Marin Farmers Market

11250 HWY 1, Pt. Reyes Station

Saturdays – 9:00 am – 1:00 pm

June - October

Sausalito Farmers Market

Bridgeway - Dunphy Park, Sausalito

Saturdays – 9:00 am – 1:30 pm

June - December

Canal Mercado Farmers Market

Alto St., San Rafael

Tuesdays – 6:00 pm – 9:00 pm

July - September

Fairfax Farmers Market

Sir Francis Drake - Parking Lot

Opposite Perry's Deli

Wednesdays – 4:00 pm – 8:00 pm

May – October

Corte Madera Farmers Market

1554 Redwood HWY (The Village Mall)

Wednesdays – 1:00 pm - 6:00 pm

Open All Year

San Geronimo Farmers Market

Valley Presbyterian Church

Saturdays – 9:00 am – Noon

May - October



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