



MARIN COUNTY DEPARTMENT OF AGRICULTURE • WEIGHTS AND MEASURES

STACY K. CARLSEN

COMMISSIONER/DIRECTOR

FRED W. CROWDER

DEPUTY COMMISSIONER/DIRECTOR

April 1, 2003

William J. Lyons, Jr., Secretary
California Department of Food and Agriculture
And
Marin County Board of Supervisors
Annette Rose, President, District 3

Susan Adams,	District 1	Steve Kinsey,	District 4
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 2002. This report is a summary of counts, acreage, yields, and gross value of agricultural production in Marin County. The 2002 gross value of all production was \$44,477,072. This is a decrease of \$6,423,285 or 13% from the 2001 total agricultural production value. The report represents gross returns to the producer and does not indicate actual net profit.

Milk is the long standing, premier commodity for Marin, and this year accounts for over 53% of the crop report's total value. Milk experienced a 21.8% decrease in value from 2001, as milk market prices dropped. Production dropped by 1%.

Livestock and poultry value decreased by \$447,776, or 4%. Prices received for dairy cattle, beef cattle, and sheep decreased from last year's market prices. However, poultry value went up \$44,613 or 2%.

Aquaculture experienced a 33% increase in value over last year in spite of mortality rates caused by disease, predation, sediment, variation in salinity, and weather conditions.

The value of field, fruit and vegetable production, excluding wine grapes, went up by \$10,520, a 0.2% increase in total value. The total value of wine grapes decreased by \$210,968, or 45%. This is due to a slight drop in the wine grape acreage, as well as a 36.8% drop in total tons produced, as well as lower market values caused by an oversupply of grapes. Nursery crops experienced a gain in value of \$50,623 or 7%. Generally, nursery stock prices received by the growers are down from last year, however, a large increase in the number of plants/trees as well as some growing grounds achieving higher production yields accounts for the higher values this year.

My appreciation goes to the many growers, individuals and organizations for their cooperation in providing the information necessary for this report and special thanks to the members of my staff, Laurel Thomassin and Amanda Stephens, for working so hard to prepare it.

Respectfully submitted,

Stacy K. Carlsen
Agricultural Commissioner

Value Added Dairy Products

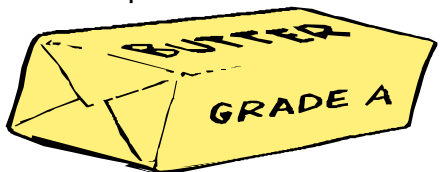
Dairying has been a major industry in California for many, many years. It is the number one agricultural industry in Marin County.

European settlers brought with them their own cattle, as the New World had no dairy cattle. These cattle provided them with meat, milk, cheese, hides, and tallow. Dairying was an incidental practice. They were generally scrawny cows, but milk was available if need be from the sturdier cows in the herd. Milk was essential to the missionaries, and over the decades, cattle herds of the missions and ranchos swelled to the thousands.

Americans drank more milk, and as they arrived in California, dairying took a new turn in its evolution. As people poured into California during the gold rush era in the mid nineteenth century, the rapid growth of San Francisco created a demand for dairy products. The coastal region north of San Francisco was the first in California to blossom into a viable dairy center. Proximity to San Francisco, rain, fog, and miles of green rolling hills provided the setting for the beginnings of Marin's dairy herds.



In 1857, Marin County produced 197,000 pounds of butter and 140,000 pounds of cheese. In 1862, Marin became the leading dairy county in California, producing 200,000 pounds of butter and 300,000 pounds of cheese from 8,095 cows. Cows in Marin County were outproducing the best dairies on the east coast. Generally speaking, in comparison with other dairy regions in the United States, California has better dairying conditions because of its mild climate. Dairy stock can exist out of doors for most of the year. Add to that, Marin's plentiful space, natural pastures, and fresh water from springs and you have the ingredients for success. In



1865, 13,747 Marin County dairy cows produced 350,000 pounds of butter and 450,000 pounds of cheese. In 1872 the number of dairy cows rose to 19,140, producing 4,387,500 pounds of butter.

In 1904 Marin County was ranked number two in dairy production in California. Today Marin ranks number 15 in dairy production with a total of 29 dairies, and 9,500 milk cows producing 205,591,000 pounds of milk.

While per capita beverage milk consumption has dropped during the last quarter century, other value added dairy products have countered this trend. As milk prices drop, farmers struggle to find ways to increase farm income - interest in "adding value" to farm products has grown tremendously. The value of farm products can be increased in seemingly endless ways: by cleaning, cooling, cooking, combining, churning, culturing, grinding, hulling, extracting, drying, smoking, handcrafting, spinning, weaving, labeling, packaging, distributing, and by adding information, education, or entertainment.

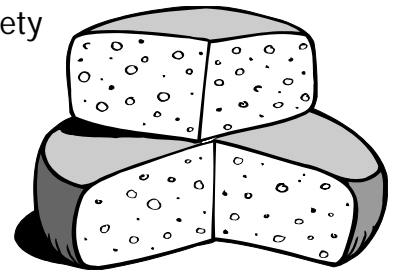
Cheese, yogurt, yogurt smoothies, cream, ice cream, butter, flavored milk beverages – all are examples of local value added dairy products. Snacking between meals has increased and these specialty foods have become very popular.

Marin County is home to a unique blue cheese farmstead cheese, where the cheese is handmade on the farm using only milk from the herd located on that farm. The farmstead producer is able to direct the cheese making process from determining the milk producing animal's diet through the final aging of the cheese.

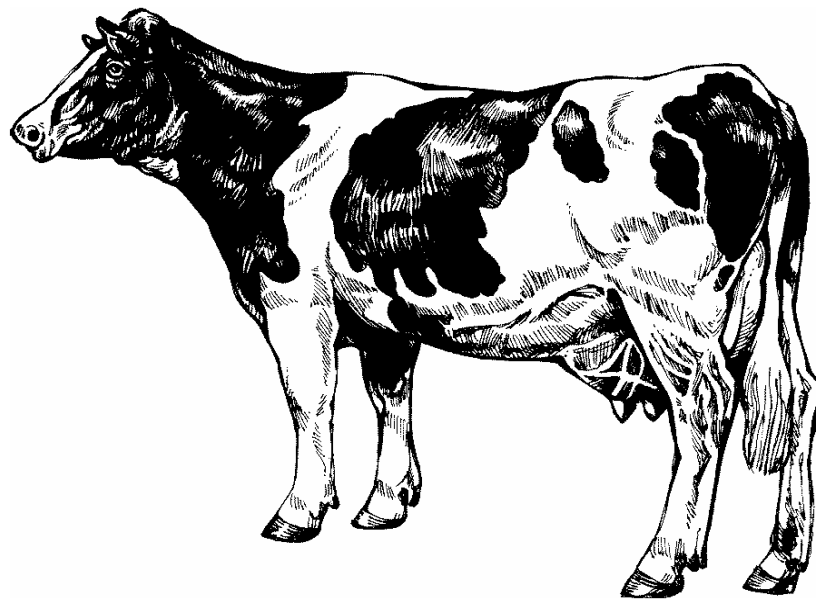
One dairy farmer has diversified by taking advantage of Marin's cooler temperatures to grow strawberries.

One organic dairy runs both a dairy and a creamery, producing a variety of quality specialty value added organic products, but unlike other companies, only process their own products in their plant.

The California dairy industry has come a long way from those first scrappy cows to becoming a national leader in total milk production. Marin County dairying has played a big part in this continually evolving process.



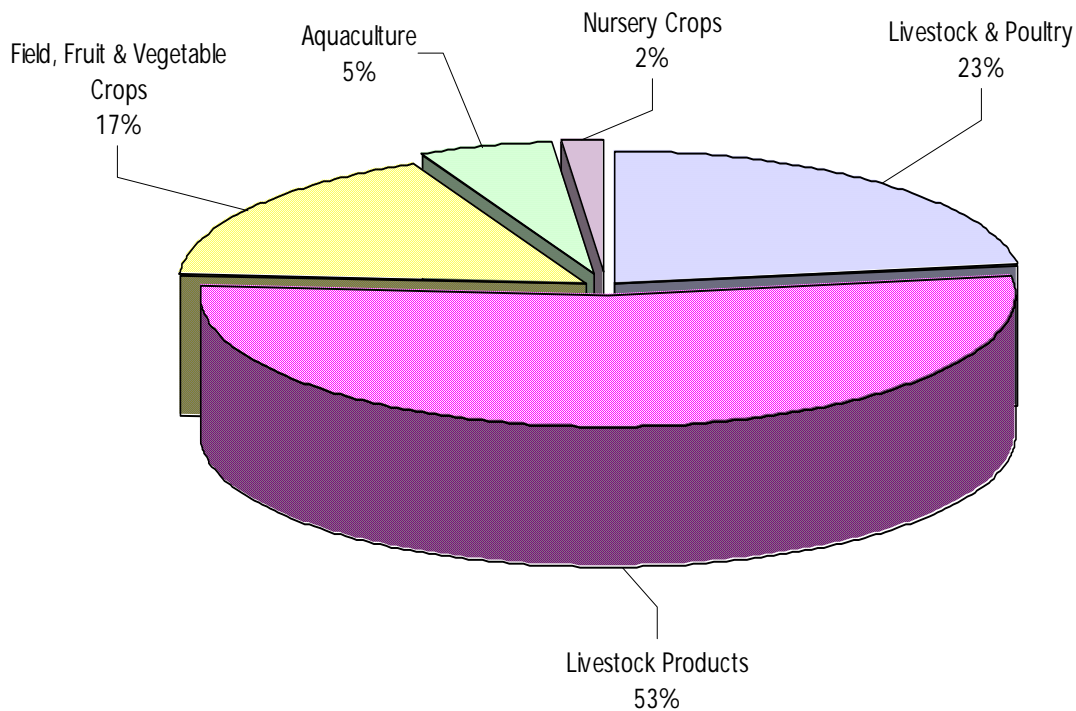
Locally produced value added dairy products direct from the ranch to the consumer's table provide a window into the unique qualities of Marin County. Support our local farmers by buying locally and see for yourself the superior taste, quality and freshness.



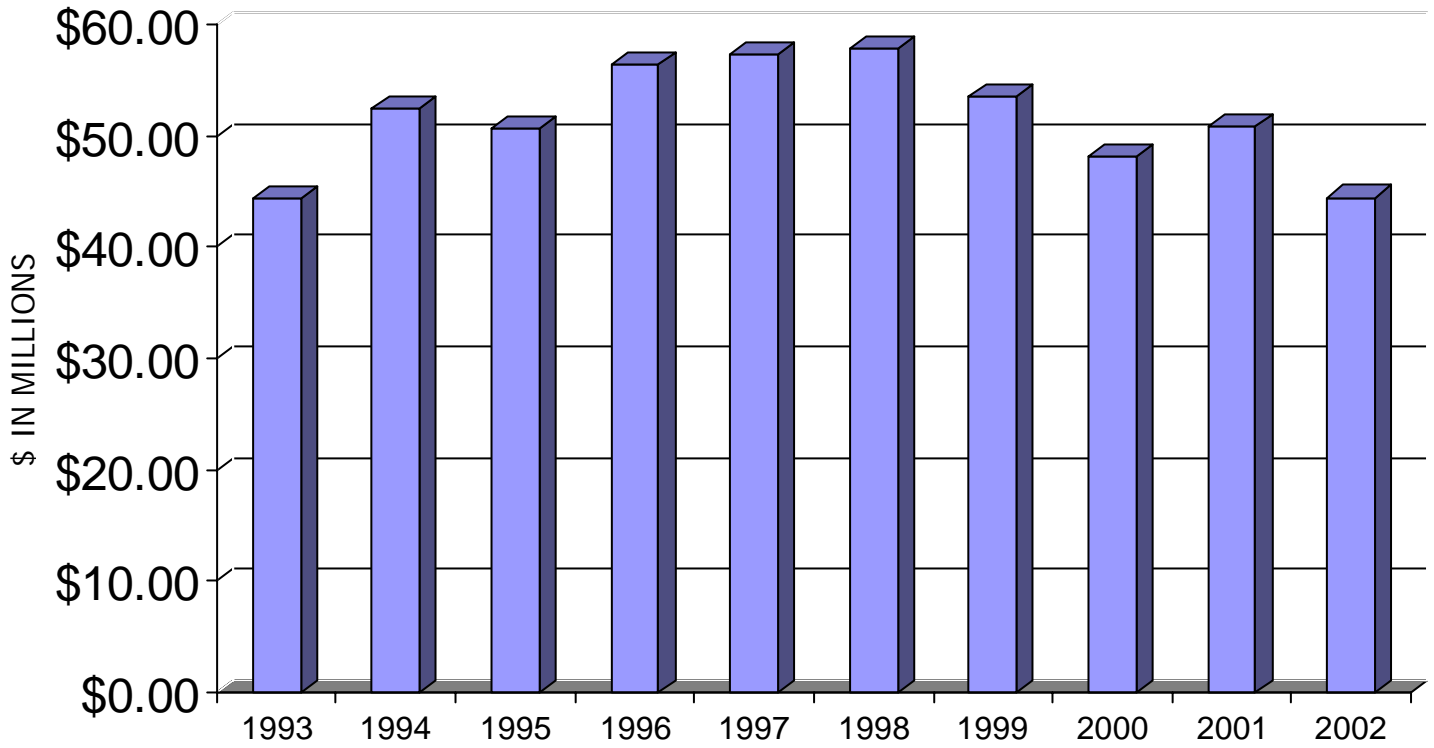
Summary of Production

	<u>2002</u>	<u>2001</u>
Livestock Products	\$ 23,782,019	\$ 30,397,233
Livestock & Poultry	\$ 10,104,389	\$ 10,552,165
Field, Fruit & Vegetable Crops	\$ 7,467,729	\$ 7,668,177
Aquaculture	\$ 2,397,845	\$ 1,608,315
Nursery Crops	\$ 725,090	\$ 674,467
TOTAL	\$ 44,477,072	\$ 50,900,357

2002 Production Summary



Agricultural Production Gross Value A Ten Year Summary



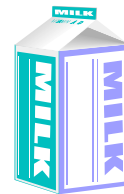
Livestock, Poultry and Aquaculture

Item	Year	No. of Head	Live Weight	Unit	Dollar Value	
					\$/Unit	Total
Cattle & Calves	2002	17,490	106,443	cwt	\$ 64.82	\$ 6,899,387
	2001	18,290	110,358	cwt	\$ 69.22	\$ 7,638,981
Sheep & Lambs	2002	9,271	10,013	cwt	\$ 59.61	\$ 596,880
	2001	5,516	5,958	cwt	\$ 58.69	\$ 349,675
Poultry & Eggs*	2002	60,492				\$ 2,608,122
	2001	42,117				\$ 2,563,509
Aquaculture	2002		Oysters, Mussels, & Clams			\$ 2,397,845
	2001		Oysters, Mussels, & Clams			\$ 1,608,315
Total	2002					\$ 12,502,234
	2001					\$ 12,160,480

* parent stock hatching eggs



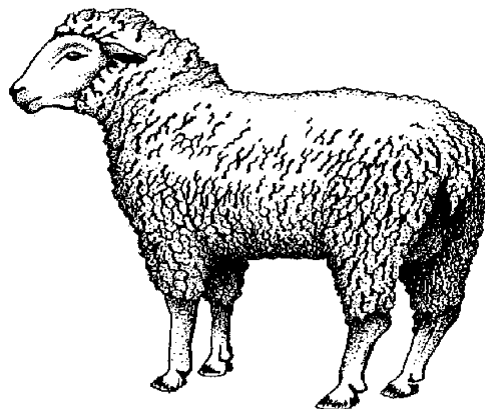
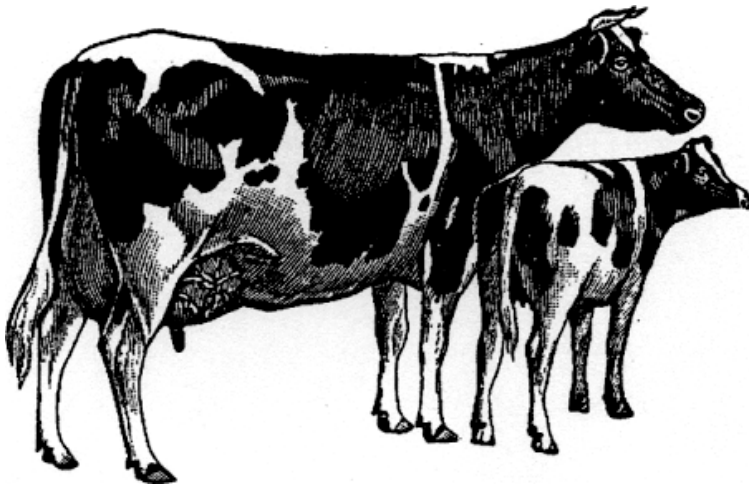
Livestock Products



Item	Year	Production	Unit	Dollar Value	
				\$/Unit	Total
Milk (Market)	2002	2,054,495	cwt	\$ 11.56	\$ 23,749,962
	2001	2,069,751	cwt	\$ 14.62	\$ 30,259,760
Milk (Manufacturing)	2002	1,415	cwt	\$ 10.04	\$ 14,207
	2001	8,615	cwt	\$ 12.64	108,893
Wool	2002	71,400	lbs	\$ 0.25	\$ 17,850
	2001	71,450	lbs	\$ 0.40	\$ 28,580
Total	2002				\$ 23,782,019
	2001				\$ 30,397,233

Inventories of Livestock and Poultry (Number of Head as of January 1, 2003)

ITEM	NUMBER
Cattle and Calves, all	37,772
Milk cows and heifers 2 years and over	9,500
Beef cows and heifers 2 years and over	12,000
Sheep and Lambs, all	19,325
Poultry	60,492



Field, Fruit and Vegetable Crops

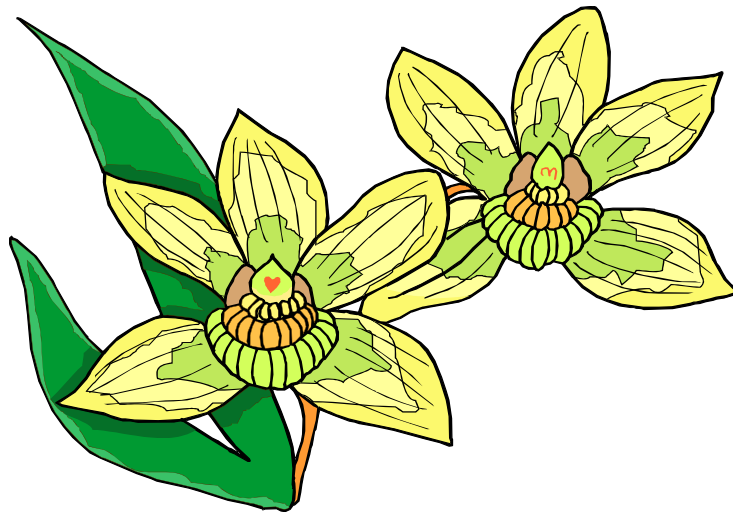
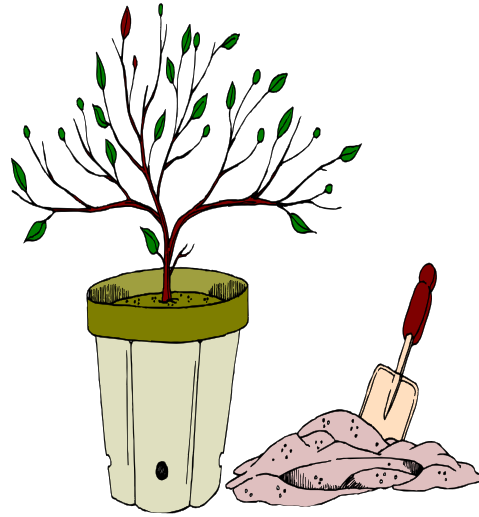
Item	Year	Harvested Acreage	Ton/ Acre	Total Tons	Unit	Dollar Value	
						\$/Unit	Total
Hay, Grass	2002	1,940	2.0	3,880	ton	\$ 56.00	\$ 217,280
	2001	1,995	2.5	4,988	ton	\$ 58.38	291,199
Hay, Oat	2002	1,500	2.0	3,000	ton	\$ 77.50	\$ 232,500
	2001	1,525	2.1	3,203	ton	\$ 77.49	\$ 248,200
Silage	2002	2,794	11	30,734	ton	\$ 27.00	\$ 829,818
	2001	3,025	14	42,350	ton	\$ 29.00	\$ 1,228,150
Hay, Grain	2002	300	.75	225	ton	\$ 320.00	\$ 72,000
	2001	190	.72	137	ton	\$ 340.00	\$ 46,580
Pasture, Irrigated	2002	810				\$ 100.00	\$ 81,000
	2001	810				\$ 100.00	\$ 81,000
Pasture, Other	2002	154,000				\$ 29.00	\$ 4,466,000
	2001	154,000				\$ 29.00	\$ 4,466,000
Fruits & Vegetables	2002	174.8					\$ 1,314,161
	2001	138.2					\$ 841,110
Grapes, Wine*	2002	82		144.5	ton		\$ 254,970
	2001	95		228.4	ton		\$ 465,938
Total	2002						\$ 7,467,729
	2001						\$ 7,668,177

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



Nursery Products

Item	Year	Production Acres	Dollar Value Total
Nursery	2002	42	\$ 725,090
Stock, All	2001	40.50	\$ 674,467



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 the 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 exotic 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 exotic pests outside of a known infested area. The goal is to find infestations of harmful exotic pests and eradicate them before it becomes biologically or economically unfeasible.

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 a permit process 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 where ever possible and take 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. At this time the county has exceeded that goal with current estimates showing a greater than 80% pesticide use reduction.

The Marin County Agricultural Commissioner's Office has been developing a model IPM program for schools. This program has been established to develop pro-active pest management systems and to provide maintenance personnel and other school staff pest management tools that are effective while reducing risk to human health and the environment.

Product Quality

Marin County inspectors are protecting consumers by inspecting agricultural products for compliance with laws, regulations, and standards and ensuring that businesses are afforded a fair and equitable opportunity to market their products. Inspections are conducted at horticultural nurseries, farmers markets, and organic farms, as well as locations selling wholesale and retail eggs.

Weights and Measures

The Weights and Measures program protects the interests of the consumer and market place to ensure honesty and integrity of routine transactions when products are sold by weight, measure, count or time. This is accomplished through continuous and systematic inspection of all equipment that is used to weigh or measure a commodity. 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 by volume, count, or weight 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 balancing resource use in such a manner that it provides for current needs while ensuring such resources will be available to meet the needs of future generations.

Organic Food Production, Registration, and Certification

Organic production systems strive to achieve agro-ecosystems that are ecologically, socially, and economically sustainable. Organic farming emphasizes a greater cooperation with nature without reliance on synthetic inputs.

All California organic producers register in their principal county of operation. There are 24 registered organic producers in Marin County, farming 1,560 acres, producing a total gross value of 3.9 million dollars.

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

Marin Organic Certified Agriculture (MOCA) is a new program offered by the Marin County Agricultural Commissioner's office. MOCA was recently accredited by the USDA as an official organic certification agency.

Local and statewide consumer demand for certified products is increasing with an expectation by consumers that organic products are verifiable. MOCA was developed to provide a professional service to local individual and business operations engaged in the production and distribution of organically grown commodities. MOCA certification verifies compliance with the USDA National Organic Program standards and documents the operation practices of a sustainable agricultural system. MOCA certified 18 growers and 1 processor in 2002.

Biological Control

Biological pest control is the use of natural enemies to help suppress pest populations to economically and environmentally acceptable levels. Once the agent becomes established, control is self-perpetuating, potentially reducing the need to use pesticides. The following are pests found in Marin and some of the methods being used to control them.

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
Eucalyptus Red Gum Lerp Psyllid

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
Parasitic Wasp

Marin/Sonoma Weed Management Area

A weed management area group was formed for Marin and Southern Sonoma Counties in early 1999. The Weed Management Area's (WMA) plan is to unite individual ownership and public agencies, provide an opportunity to share resources in mapping, planning information and help control weeds across land ownership boundaries. The WMA has performed a number of weed control projects made possible by the state legislature passing AB 1168 and SB 1740 which provide funding to WMA's. With this funding, the WMA has hand pulled woolly distaff thistle (*Carthamus lanatus*), and purple star thistle (*Centaurea calcitrapa*). The WMA works with all landowners to determine the best method of control of each individual landowner's requirements. Where there are sites potentially harboring endangered or threatened species of plants and animals, hand removal is the method of choice. Mechanical and chemical removal of weeds is utilized at other sites. The WMA also conducted a number of public workshops on how to control weeds and a hand pulling field day. Anyone is welcome to come to the meetings and everyone is welcome to help control weeds.

Pest Exclusion

In 2002, Marin County personnel conducted 5,171 incoming plant quarantine inspections. Plant shipments were monitored at Federal Express, UPS, nurseries, ethnic markets, aquatic supply stores, and post entry quarantine. 51 gypsy moth inspections of household goods from eastern states were conducted, as well as 1,971 Glassy-Winged Sharp Shooter inspections on plant material from infested California counties.

28 rejections of plant material were made. Rejected plant material was either destroyed or reconditioned and released.

A total of 14 pests were intercepted. Of those, 11 were "Q" rated, and 1 was "A" rated, and 2 were "C" or "D" rated.

The following is a list of the significant pest interceptions:

Scientific Name	Common Name	Rating
<i>Lymantria dispar</i>	Gypsy Moth	A
<i>Maris cornuarletis</i>	Giant Ramhorn Snail	Q
<i>Orchamoplatus mammaeferus</i>	Croton Whitefly	Q
<i>Pheidole megacephala</i>	Big Headed Ant	Q
<i>Pomacea canaliculata</i>	Apple Snail	Q
<i>Pomacea</i> species	Apple Snail	Q

Q – rating: Quarantine Action

A – rating: State Action

B – rating: County Action

C – rating: County Action at Discretion of the Agricultural Commissioner

D – rating: No action



Pest Detection

1,378 traps were serviced for exotic insect pests (including Mediterranean and Oriental Fruit Flies, Mexican Fruit Fly, Olive Fruit Fly, Gypsy Moth, Japanese Beetle, Melon fly, and Glassy-Winged Sharpshooter). Of the 1,378 traps, 167 traps were placed for the Glassy-Winged sharpshooter in nurseries and vineyards throughout the county, and 4 Olive Fruit Fly traps were placed in olive orchards.

Glassy-Winged Sharpshooter

The Glassy-Winged Sharpshooter (GWSS) (*Homalodisca coagulata*) is a serious pest in California. This insect was first observed in California in 1990 and is now found throughout Southern California and portions of the San Joaquin Valley. It is a particular threat to vineyards due to its ability to spread *Xylella fastidiosa*, the bacterium that causes Pierce's disease. Pierce's disease kills grapevines and there are no effective treatments for it. The Glassy-Winged Sharpshooter also spreads other diseases to a variety of agricultural and ornamental plants, having the potential to substantially impact California's agriculture and environment if left unchecked.

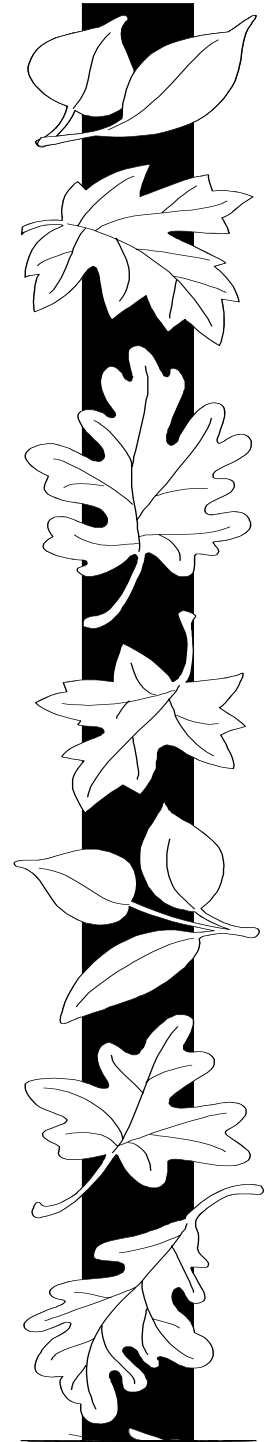
To prevent the introduction of this leafhopper into Marin County, staff inspect all incoming nursery plant shipments from infested California counties. A total of 1,971 shipments were inspected for GWSS. Detection traps placed throughout the county are also monitored for the Homopterus pest.

Sudden Oak Death (SOD)

Since 1995, tanoak, coast live oak, and black oak trees have been dying in the counties of Alameda, Contra Costa, Humboldt, Marin, Mendocino, Monterey, Napa, San Mateo, Santa Clara, Santa Cruz, Solano, and Sonoma. The elevated mortality of these trees is alarming as such a massive dieback of these species has never been reported in California. The spread of the disease is not fully known, and may become more extensive in upcoming years. Research pathologists have isolated the fungal causal agent – a new species of *Phytophthora*, recently designated as *P. ramorum*. This organism infects and destroys the inner bark in the lower trunk of oak trees, causing decline and eventual death of the tree.

In addition to the tree host species listed above, *Phytophthora ramorum* has also been isolated from the leaves and stems of camellias, rhododendrons, evergreen huckleberry, shreve oak, California bay laurel, California buckeye, big leaf maple, manzanita, California coffeeberry, toyon, hairy honeysuckle, arrowwood, canyon live oak, coast redwood, Douglas fir and madrone. So far, all positive cases of *Phytophthora* come from wildland/forest settings, or from trees in the urban/wildland interface zone such is found in Marin County.

The California Oak Mortality Task Force (COMTF) was established to research and understand the disease process in an effort to manage or even control the spread of *Phytophthora*. More information with links to many other sites may be obtained at www.suddenoakdeath.org and www.camfer.cnr.berkeley.edu/oaks



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 24 certified producers that have been issued certificates in Marin County. The following 8 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

Fairfax Farmers Market

Broadway, in Fairfax Theatre
Parking Lot
Wednesdays – 4:00 pm – 8:00 pm
May – October

Old Town Novato Farmers Market

Down Town, Novato
Tuesdays – 4:00 pm – 8:00 pm
May - November

Downtown San Rafael Farmers Mrk

Fourth St., San Rafael
Thursdays – 6:00 pm – 9:00 pm
April - September

Sausalito Farmers Market

Sausalito Ferry Landing
Fridays – 4:00 pm – 8:00 pm
June - November

Corte Madera Farmers Market

1554 Redwood HWY (The Village Mall)
Wednesdays – 12:30 pm - 5:30 pm
Year Round

Pt. Reyes Farmers Market

11250 Hwy 1, Pt. Reyes Station
Saturdays – 9:00 am – 2:00 pm
June - October

Larkspur Farmers Market

Larkspur Landing Circle
Saturdays – 10:00 am - 2:00 pm
May - November





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