

*Marin County*

*Livestock & Agricultural  
Crop Report 2010*



MARIN COUNTY DEPARTMENT OF AGRICULTURE • WEIGHTS AND MEASURES



**STACY K. CARLSEN**  
COMMISSIONER/DIRECTOR

**STEFAN PARNAY**  
DEPUTY COMMISSIONER/DIRECTOR

May 2011

Karen Ross, Secretary  
California Department of Food and Agriculture

And

Marin County Board of Supervisors  
Susan L. Adams, President, District 1

Harold C. Brown Jr., District 2  
Charles McGlashan, District 3

Steven Kinsey, District 4  
Judy Arnold, District 5

In accordance with the provisions of Section 2279 of the California Food and Agricultural Code, I am pleased to submit the Annual Livestock and Agricultural Crop Report for 2010. This report is a summary of counts, acreage, yields, and gross value of agricultural production in Marin County. The 2010 gross value of all production was \$56,181,338. This represents an increase of \$3,465,963, 6.5% from the 2009 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 47.1% of the crop report's total value. The average Market Milk Price for 2010 was higher than 2009, contributing to an increase in overall milk value of \$4,123,000, 18.4%. 2010 was the second year milk value was not at least 50% of Marin County's total agricultural production value; the only other year being 2009.

Field Crop values for 2010 decreased by 38.2% when compared to 2009, this decrease was a result of the reported value of pasture decreasing. Participation in the annual Livestock & Crop Report survey is voluntary for agricultural producers; this decrease in value may reflect an actual decrease in pasture value, and/or a lack of participation.

Aquacultures value increased 30.4%, as production in the industry as a whole was increased following a ten year trend.

Wine grape value increased 35.3%, even though tons harvested decreased by 15.8%.

My appreciation goes to the many growers, producers, individuals and organizations for their cooperation in providing the information necessary for this report. I would like to extend special thanks to members of my staff.

Respectfully submitted,

A handwritten signature in cursive script that reads "Stacy Carlsen".

Stacy K. Carlsen  
Agricultural Commissioner

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## **Cover photo:**

*View of Mt. Tamalpais rising up behind a young man and boy resting against the hay stacks in Kentfield, circa 1929. Photo by Ralph Young. Courtesy: [Anne T. Kent California Room Collection, Marin County Free Library.](#)*

# *History of Agriculture in Marin County*

By Elena Carter, Intern

Agriculture has been a vital industry for Marin County since the mid 19<sup>th</sup> century when pioneers first arrived to homestead. According to The Regents of California Agriculture and Natural Resources, agriculture in Marin contributes close to \$50 million annually for the local economy and 50 percent of the land in Marin is used for farms and ranches. Marin's distinctive topography, characterized by mild climate, sheltered hillsides, grasslands, and breezy, coastal summers, has created ample grazing land suited to dairy and cattle ranching. Marin dairies provide the Bay Area with 20 percent of its milk production with livestock production representing the second largest agricultural industry in the county. In addition to dairy and livestock products, Marin growers have produced significant numbers of shellfish and smaller farming operations that supply Bay Area restaurants and farmers' markets with organic vegetables.

By the 1820s, Marin had been settled by "Californios," a term used to refer to Californians of Latin American descent. The Californios used the San Rafael Mission as their home base and raised thousands of longhorn cattle for their tallow and hides. These cattle ranged as far west as Point Reyes and displaced the deer and tule elk that had once grazed there. After the secularization of the California missions in 1834 by the Mexican government, which stripped the church of land ownership, placing it in the hands of the Californios, the land and cattle were divided up into gigantic ranchos. According to Marin County historian Dewey Livingston, at this time the first Mexican rancho granted in present day Marin County was given to John Reed, an Irishman and a naturalized Mexican citizen. He was the first of twenty applicants who received land in Marin before the American take-over in 1846. As American demand for land in California grew in response to the Gold Rush, the United States Congress passed the land act of 1851, which created a Board of Land Commissioners to examine the validity of Spanish and Mexican land grants; however, U.S. attorneys filed appeals, tying up the land in litigation. It took an average of seventeen years for land claims to be approved. In the process most Spanish and Mexican claimants, paying excessive legal fees, went broke and sold off their land. The result was the acquisition of land by San Francisco attorneys. The Californios were dispossessed of their land and American livestock replaced Mexican cattle.

The Gold Rush helped start Marin's successful dairy industry in the 1850s, but Marin also benefited from another type of gold: the golden butter and cheese produced by its early dairymen. Successful tenant dairy ranches were established in Point Reyes and Sausalito. Before transportation by wagons and schooners developed, early dairy farmers in Point Reyes did not produce butter because it did not stay fresh long enough to be transported to the Bay Area. For a time, San Franciscans relied on butter imported from the East Coast or Chile, but by 1854 Sonoma and Santa Clara became the city's main suppliers of butter and cheese; by 1862 Marin had passed its neighboring counties in production of these commodities and was producing a quarter of California's butter. During the Gold Rush, Point Reyes was particularly famous for its butter, with the Point Reyes Peninsula recognized as the starting place for the West Marin dairy empire.

Back then most dairy operations were small, consisting of a dwelling, milking corral, dairy house, horse barn, calf shed, pig pens, and 10 to 15 cows that were milked by hand twice a day. Olema Valley dairymen built larger milking barns in contrast to Point Reyes dairymen who went without large barns until the 1880s. The first Marin dairies hired family, transients, and those who had come during the Gold Rush. In the 1860s a wave of immigrants, particularly Italian-speaking Swiss, came to Marin, becoming active in Olema Valley dairies and establishing family farms. In the early 1900s regulatory agencies established sanitary standards for ranches and creameries, introduced construction specifications for milking barns, and tested for milk purity and butterfat content. California began certifying dairies in the 1920s, which resulted in the A and B grading system.

Whereas Tomales, Olema, and Nicasio were important trading centers for dairy products, the coastal towns of Bolinas and Tomales served as shipping ports; potatoes, grains, and clams were shipped to San Francisco. Shallow draft schooners provided the most reliable form of transportation, carrying passengers and cargo to and from San Francisco. In 1870, the North Pacific Coast Railroad was completed and towns along the railroad including Fairfax, Mill Valley and San Rafael flourished, replacing Olema in importance.

As the oldest aquaculture in Marin, oyster culture also formed a vital part of Marin agriculture. From as early as 1851, entrepreneurs in San Francisco established businesses marketing oysters. In 1880 the United States was the largest producer of shellfish worldwide with the Bay Area ranking as the sixth largest harvester in the country. The Tomales Bay Oyster Company, California's oldest continuously-run shellfish farm, was founded in 1909. Today Marin is second only to Humboldt Bay in shellfish production.

The 20<sup>th</sup> century saw many changes for Marin agriculture. The San Francisco Bay area pushed for the creation of the Muir Woods National Monument in 1908 and various county and state parks in the 30s and 40s. Point Reyes National Seashore was authorized by President John F. Kennedy in 1962 followed by the authorization of the Golden Gate National Recreation area. Later acts of Congress added acreage to Point Reyes National Seashore including the Inverness Ridge and Bear Valley areas in 1974.

However, on the whole, from 1949 to 1982, 783,000 acres, approximately one-quarter of Marin's farmland, was lost to development. Today there are approximately 276 ranches in Marin compared to 1,800 shown in the 1944 census. In 1967, the Marin County Planning Department proposed an extension of California State Highway 17, the damming of Walker Creek, and the reservation of 100 acres of land, including the wetlands of Point Reyes and Olema, to be turned into shopping centers and car dealerships. Citizens elected anti-development supervisors, halting the development plans. In 1965 state legislature enacted the Williamson act, which called for contracts between local governments and landowners to restrict development on land parcels for up to ten years. In 1998, the Williamson Act was amended to create the establishment of the Farmland Security Zones (FSZ). FSZ contracts allowed farmers to receive a 35 percent reduction in land value for tax purposes on the condition that the farmer keep the land enrolled in the program for 20 years. In 1973 Marin County created three environmental corridors: a Coastal Recreation Center for open space, recreation and agricultural land; an Inland Rural Corridor for agriculture, resource and habitat protection; and a City Center for Marin's eleven cities. In 1980, the Marin Agricultural Land Trust (MALT) was formed, which fought developmental proposals and helped to preserve agricultural land through obtaining conservation easements on 33,000 acres. Conservation easements prohibit non-agricultural development and subdivision, keeping the land in agriculture forever.

According to MALT, in 2008 Marin animal and pasture products were valued at \$49 million. Other crops added another \$14 million in value. Dairy, beef and sheep ranching continue to form an important part of Marin agriculture. Today many dairy ranches are computerized; cows are milked by machine and thousands of gallons of milk are pumped into tanks. But, according to MALT, not much has changed; many of these Marin ranches have been passed down through the same family for generations as farmers continue to honor the tradition of family farming started by their grandparents and great-grandparents.

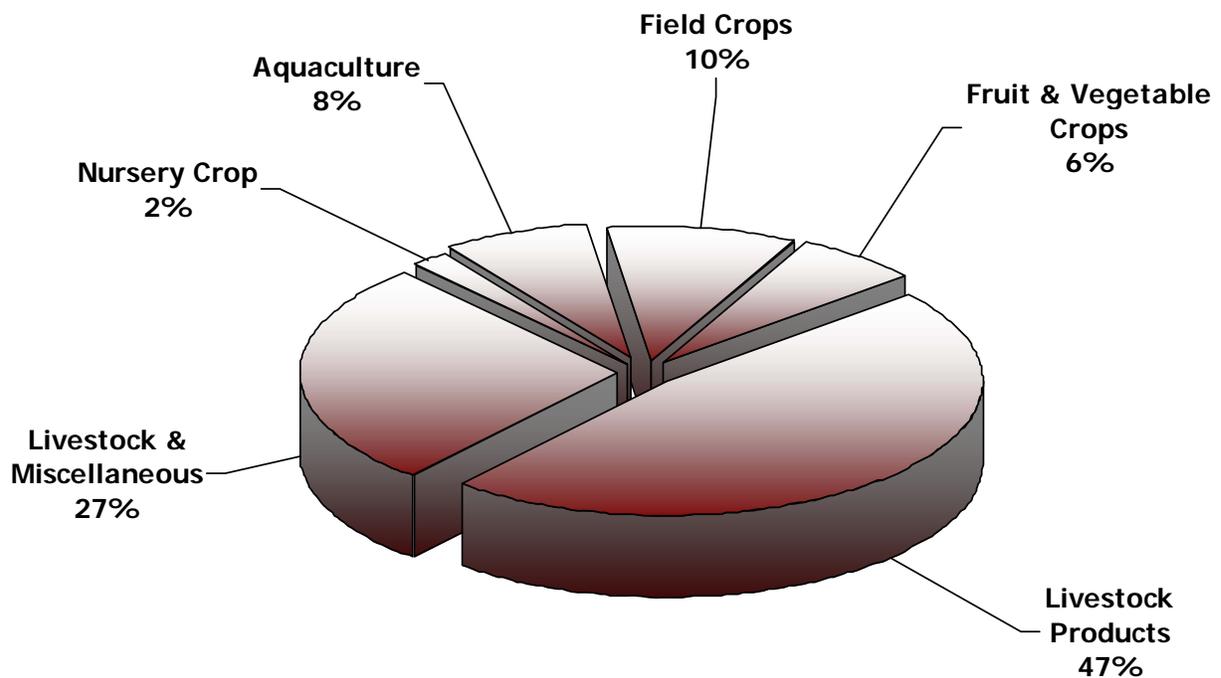
The following resources were used for this report:

- Historical Roots of Marin Agriculture. Grown in Marin. The Regents of the University of California, 2010. Web. 5 Aug 2010. (<http://groups.ucanr.org/GIM>)
- Livingston, Dewey. *A Good Life: Dairy Farming in the Olema Valley*.
- Marin Agricultural Land Trust website ([www.malt.org](http://www.malt.org))
- Dell, Shari-Faye. "Established in 1909, Tomales Bay Oyster Company, California's oldest continuously run shellfish farm." (<http://tomalesbayoysters.com/>)

# *Agricultural Production Summary*

Type of Agricultural Production	2010	2009
Livestock Products	\$26,533,463	\$22,405,683
Livestock & Miscellaneous	\$15,339,444	\$14,336,421
Field Crops	\$5,507,574	\$8,917,552
Fruit, Grape, & Vegetable Crops	\$3,549,337	\$2,789,367
Aquaculture	\$4,259,537	\$3,265,951
Nursery Crops	\$991,983	\$1,000,401
<b>AGRICULTURAL GROSS VALUE</b>	<b>\$56,181,338</b>	<b>\$52,715,375</b>

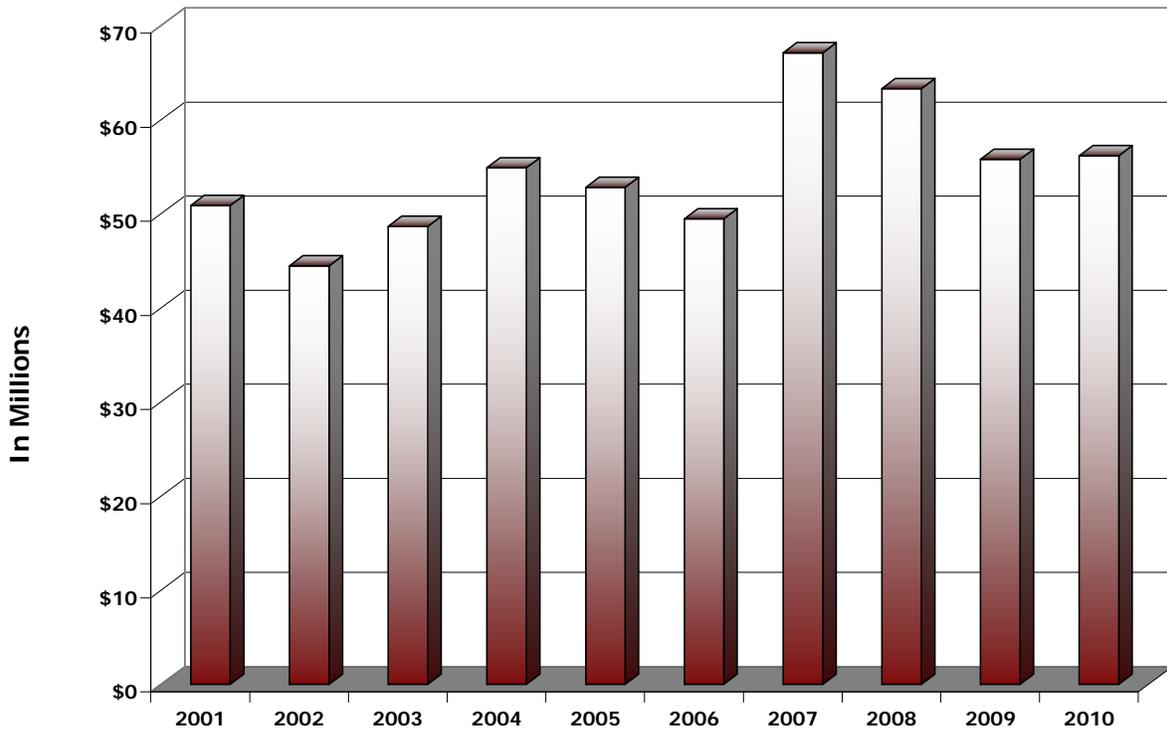
The 2010 gross value of all agricultural production was \$56,181,338. This represents an increase of approximately \$3,465,963 (6.5%) from the 2009 agricultural production gross value.



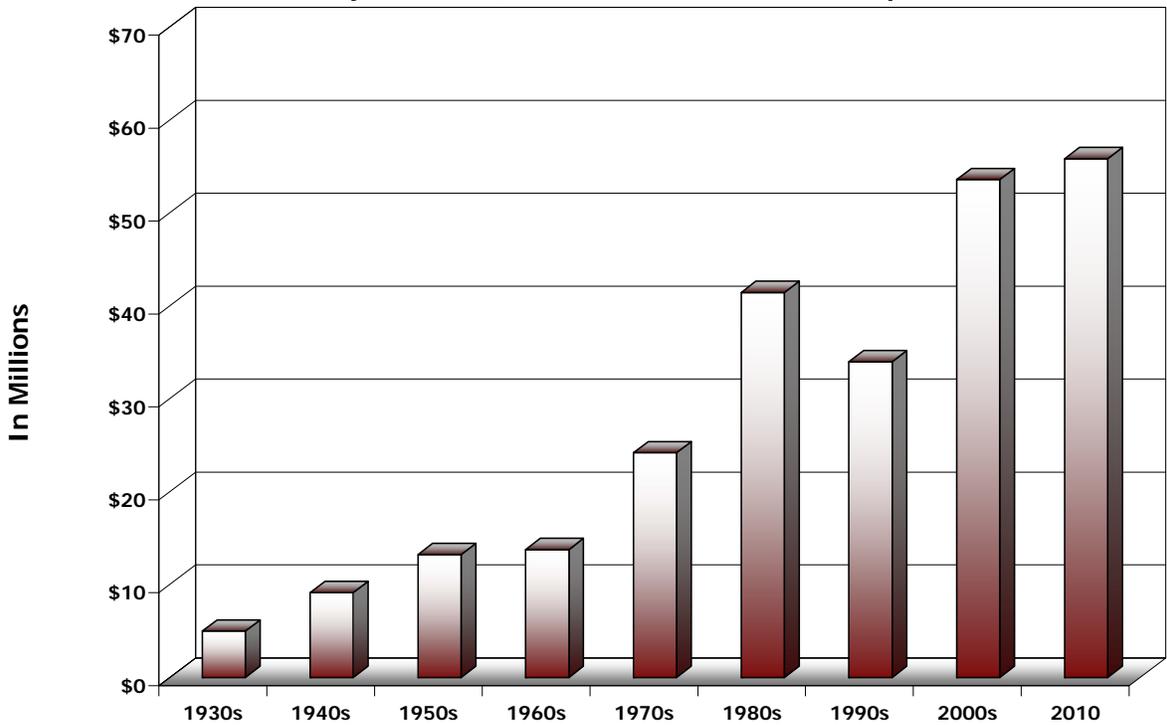
This graph illustrates how the 2010 agricultural gross value breaks down across the various types of agricultural production.

# *Agricultural Production Gross Value*

## *Ten Year Summary*



## *Seventy-Five Year Historical Retrospective*



The Historical Retrospective graph shows the averaged Marin County Agricultural Gross Values for each decade since 1935. Notes: These values are not adjusted for inflation. The 1930s value is the average of 1935 – 1939 and the value for 2010 is not an averaged value but is presented simply to show how this year's gross value compares to the decade averages.

## *Livestock and Aquaculture*

<b>Item</b>	<b>Year</b>	<b>Number of head</b>	<b>Live Weight</b>	<b>Unit</b>	<b>\$/Unit</b>	<b>Dollar Value Total</b>
Cattle & Calves~	<b>2010</b>	<b>14,563</b>	<b>85,174</b>	<b>cwt</b>	<b>\$88.17</b>	<b>\$7,509,739</b>
	2009	13,792	81,404	cwt	\$76.37	\$6,216,789
Sheep & Lambs~	<b>2010</b>	<b>15,326</b>	<b>16,552</b>	<b>cwt</b>	<b>\$92.02</b>	<b>\$1,523,155</b>
	2009	12,133	13,103	cwt	\$75.37	\$987,585
Miscellaneous <sup>†</sup>	<b>2010</b>	<b>6,604</b>				<b>\$412,250</b>
	2009	3,893				\$315,468
Poultry*	<b>2010</b>	<b>278,833</b>				<b>\$6,254,300</b>
	2009	245,127				\$6,816,579
Aquaculture	<b>2010</b>		Oysters, Mussels, & Clams			<b>\$4,259,537</b>
	2009		Oysters, Mussels, & Clams			\$3,265,951
<b>Total</b>	<b>2010</b>					<b>\$19,598,981</b>
	2009					\$17,602,372

<sup>†</sup> Miscellaneous figures include goats, hogs, and rabbits.

\* Poultry 2009 figures include poultry fryers and chicken eggs for consumption.

~ Due to unavoidable computational rounding, the Dollar Value Total is overestimated by less than 0.01%.



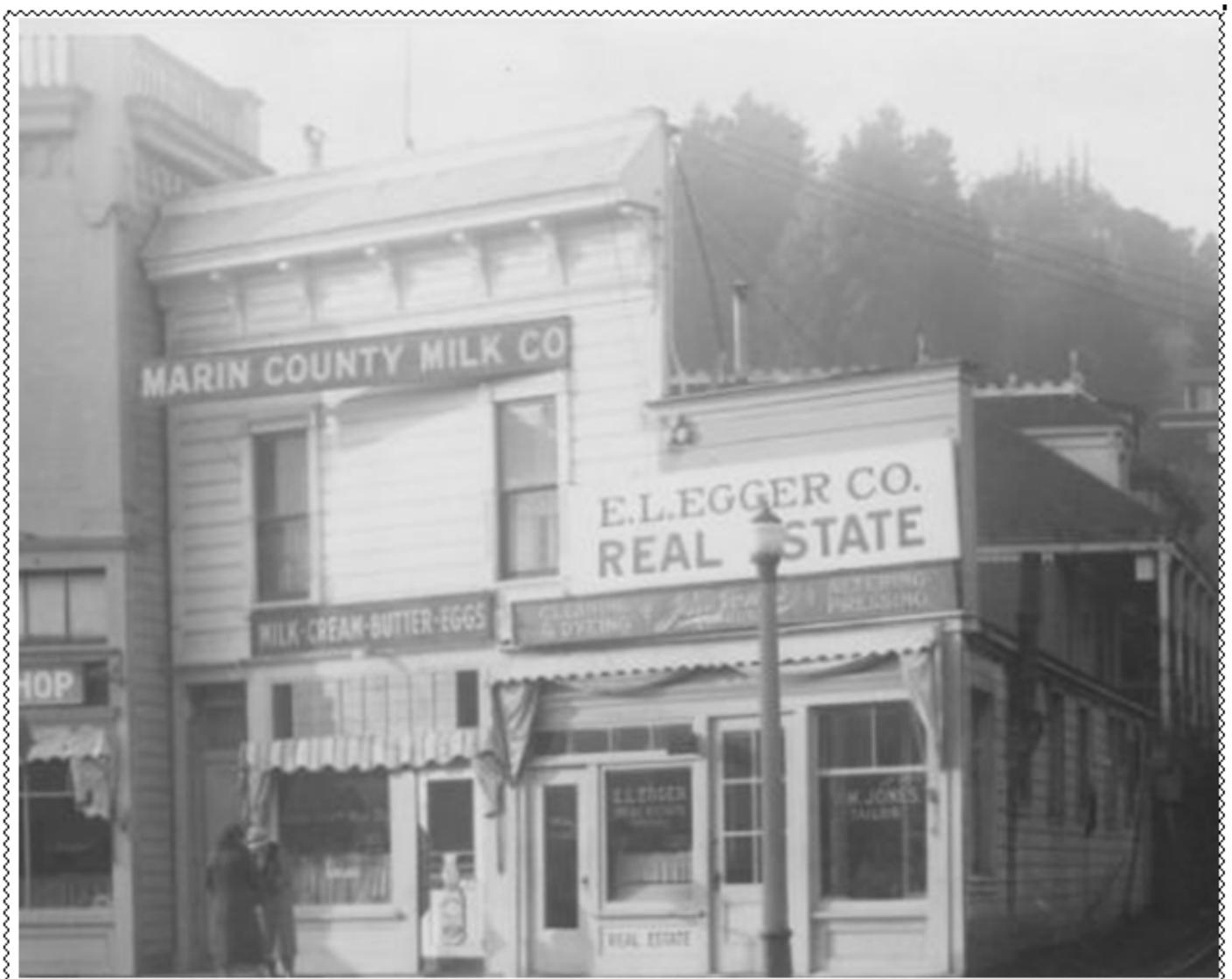
*Dr. Henry Orton Howitt and Ms. K. Hooper catch starfish in Bolinas Bay, Bolinas, May 1914.*

[Anne T. Kent California Room Collection](#), Marin County Free Library.

## *Livestock Products*

Item	Year	Production	Unit	\$ / Unit	Dollar Value Total
Milk~ (Market)	<b>2010</b>	<b>1,701,328</b>	<b>cwt</b>	<b>\$15.57</b>	<b>\$26,492,000</b>
	2009	1,821,788	cwt	\$12.28	\$22,370,000
Milk~ (Manufacturing)	<b>2010</b>	<b>65</b>	<b>cwt</b>	<b>\$15.38</b>	<b>\$1,000</b>
	2009	0	cwt	\$0	\$0
Wool~	<b>2010</b>	<b>82,652</b>		<b>\$0.49</b>	<b>\$40,463</b>
	2009	74,341	lbs	\$0.48	\$35,683
<b>Total</b>	<b>2010</b>				<b>\$26,533,463</b>
	2009				\$22,405,683

~ Due to unavoidable computational rounding, the Dollar Value Total value is overestimated by less than 0.01%.



*Shops on Throckmorton Ave. at Lytton Square, Mill Valley. On the corner building, the following signs read, "Marin County Milk Co," "Milk-Cream-Butter-Eggs," "E.L. Egger Co. Real Estate," and "J.M. Jones Tailors - Cleaning & Dyeing - Altering, Pressing." Two women are conversing on the sidewalk outside the milk store. Circa 1920 - 1924. Photographer: Unknown. Mill Valley Public Library History Room Collection. [Mill Valley Public Library](http://www.millvalleypubliclibrary.org).*

## *Inventories of Livestock and Poultry*

Commodity		Head	Number
Cattle <sup>†</sup>	Total*	31,251	
	Milk cows & heifers (2 years and over)	9,000	
	Beef cows & heifers (2 years and over)	8,000	
Sheep and Lambs, all <sup>†</sup>		10,293	
Poultry			278,833
Miscellaneous**			6,604

<sup>†</sup> Number of Head as of January 1, 2011.

\* Includes cows, heifers, calves, and bulls.

\*\* Miscellaneous 2010 figures include goats, hogs, and rabbits.



*Cows grazing at the Bear Valley Ranch, Marin County, California, circa 1945.  
Photographer: Wood, Seth. [Anne T. Kent California Room Collection](#), Marin County Free Library.*

## *Field, Fruit and Vegetable Crops*

<b>Commodity</b>	<b>Year</b>	<b>Harvested Acreage</b>	<b>Ton / Acre</b>	<b>Total Tons</b>	<b>Unit</b>	<b>\$ / Unit</b>	<b>Dollar Value Total</b>
Hay <sup>†</sup>	<b>2010</b>	<b>2,215</b>	<b>2.27</b>	<b>5,024</b>	<b>ton</b>	<b>\$93.72</b>	<b>\$470,879</b>
	2009	1,850	2.05	3,793	ton	\$97.96	\$371,562
Silage <sup>~</sup>	<b>2010</b>	<b>2,123</b>	<b>13.40</b>	<b>28,448</b>	<b>ton</b>	<b>\$47.36</b>	<b>\$1,347,297</b>
	2009	2,278	12.00	27,336	ton	\$33.90	\$926,690
Pasture, Irrigated	<b>2010</b>	<b>810</b>				<b>\$100.00</b>	<b>\$81,000</b>
	2009	810				\$100.00	\$81,000
Pasture, Other <sup>~</sup>	<b>2010</b>	<b>154,000</b>				<b>\$23.43</b>	<b>\$3,608,398</b>
	2009	154,000				\$48.95	\$7,538,300
Fruits & Vegetables	<b>2010</b>	<b>300</b>					<b>\$2,488,000</b>
	2009	384					\$2,005,426
Grapes, Wine <sup>*~</sup>	<b>2010</b>	<b>186</b>		<b>207.4</b>	<b>ton</b>		<b>\$1,061,337</b>
	2009	182		246.4	ton		\$783,941
Total	<b>2010</b>				<b>ton</b>		<b>\$9,056,911</b>
	2009				ton		\$11,706,919

<sup>†</sup> Values include Grass Hay, Oat Hay, Oat Seed, and Vetch Seed

<sup>\*</sup> Varieties: Cabernet Sauvignon, Chardonnay, Merlot, Pinot Noir, Shiraz, and Riesling. Acreage values include 16 acres of Non-fruit bearing plantings. 2009 acreage has been revised.

<sup>~</sup> Due to unavoidable computational rounding, the Dollar Value Total is overestimated by less than 0.01%.



*Panoramic view of the proposed Santa Venetia neighborhood, San Rafael, 1914. Note the orchard on the hillside. What is now the Santa Margarita Island Preserve is on the far left side of the picture. Creator: Venetia Company, San Francisco. [Anne T. Kent California Room Collection](#), Marin County Free Library.*

## *Nursery Products*

<b>Commodity</b>	<b>Year</b>	<b>Production Acreage</b>	<b>Dollar Value Total</b>
Nursery Stock, All	<b>2010</b>	<b>6.25</b>	<b>\$991,983</b>
	2009	6.62	\$1,000,401
	2008	6.68	\$921,975

Phytosanitary Certificates were issued for Marin-grown nursery products shipped internationally to: Nepal, Fiji, Canada, and. Algeria.



*Exterior of the "Garden Beautiful Nursery" with a seated individual tending to a potted plant. The wall of San Quentin prison is visible in the background, circa 1919. Creator: Lothers & Young Studios, San Francisco. [Anne T. Kent California Room Collection](#), Marin County Free Library.*

*Marin County*  
*Department of Agriculture*

## **Departmental Mission Statement**

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

Following is a description of the Department's Agricultural 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 primary 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 as early as possible and eradicate them before eradication becomes biologically or economically infeasible.

## **Protection of the Environment**

Marin County has developed a program of Pesticide Use Enforcement that includes a permitting process for restricted materials as well as education and assistance for pesticide users. While reviewing, collecting and analyzing data and records associated with pesticide sales and use, our Department also monitors pesticide use applications, investigates pesticide-related citizen complaints, and conducts pesticide illness investigations. The ultimate goal of this program is to ensure the safe and efficient use of pest control methods in order to protect public health and the environment while strongly promoting the production of food and fiber.

## **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, effort is focused 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 wherever 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.

## **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, organic farms, and locations selling wholesale and retail eggs.

# Summary of Our 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 68 registered organic producers in Marin County, farming 19,609 acres, which includes 19,203 acres in pasture, producing a total gross value of \$17,788,776.

## **Marin Organic Certified Agriculture (MOCA)**

The Marin County Agricultural Commissioner's Office is accredited by the USDA as an official organic certification agency. Marin Organic Certified Organic Agriculture (MOCA) serves the local community who are promoting sustainable farming practices.

Local and worldwide consumer demand for certified organic 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. The main duty of MOCA is to uphold the standards of the USDA National Organic Program, and document/verify operations' practices of sustainable agriculture. One of the most important benefits of the MOCA program is as a local service that promotes productions of organic value-added products by Marin's family farms. In 2010 the number of MOCA certified operations in Marin and Sonoma Counties was 48 operators including 1 processor.

## **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 eliminating or reducing the need to use pesticides. The following are pests found in Marin and some of the methods that have been used to control them.

### **Pest**

Gorse  
Bull Thistle  
Yellow Star Thistle  
  
Scotch Broom  
Ash White Fly  
Italian Thistle  
Purple Star Thistle  
Klamath Weed  
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,  
Rust – Puccinia jaceae var. solstitialis  
Seed Weevil, Stem Boring Moth  
Parasitic Wasp  
Seed Weevil  
Seed Weevil  
Beetle  
Parasitic Wasp

## **Livestock Protection Program**

The Marin County Board of Supervisors has continued to support and appropriate funds to the Livestock Protection Program. Recognized non-lethal control methods such as protection animals (llamas, guard dogs, etc.), electric fencing, scare devices, and herd shepherding are initiated through cost share funds to livestock ranchers. The Marin County Agricultural Commissioner's Office administers verification inspections, cost share funding, and indemnification reimbursement for verified livestock losses for ranchers participating in this program.

# *Pest Prevention Programs*

## **Pest Detection**

1,222 traps were serviced for exotic insect pests (including Mediterranean Fruit Fly and Oriental Fruit Fly, Mexican Fruit Fly, Olive Fruit Fly, Melon fly, Gypsy Moth, Japanese Beetle, Vine Mealy Bug, Asian Longhorn Beetle, Glassy-Winged Sharpshooter, Light Brown Apple Moth (LBAM) and European Grapevine Moth (EGVM)). Of the 1,222 traps, 211 traps were placed for the Glassy-Winged Sharpshooter in nurseries and vineyards, 251 Mediterranean Fruit Fly traps were placed in fruit trees, 229 Gypsy Moth traps were placed on hardwood trees, 35 LBAM traps were placed throughout the county, and 25 European Grapevine Moth traps were placed in vineyards.

## **Pest Exclusion**

In 2010, Marin County personnel conducted 1,971 incoming plant quarantine inspections. Plant shipments were monitored at Federal Express, UPS, nurseries, ethnic markets, aquatic supply stores, and post entry quarantine. 59 gypsy moth inspections of household goods from infested states were conducted, as well as 1,274 Glassy-Winged Sharpshooter inspections on plant material from infested California counties. Three rejections of plant material were made and the material was either reconditioned and released or destroyed.

## **Marin/Sonoma Weed Management Area**

The Marin Sonoma Weed Management Area (MSWMA) is a cooperative effort of federal, state, county and city agencies, private industry, and private landowners. Formed in 1999, MSWMA's goals include improving the effectiveness of local weed management efforts, increasing public awareness of invasive weeds, and advancing responsible land stewardship practices. The MSWMA unites landowners and public agencies, provides an opportunity to share resources in mapping, planning information, and helps control weeds across land ownership boundaries.

A Rapid Response Program is under development to address early infestations of invasive weeds before they spread to larger areas and require costly control methods, or become completely uncontrollable. Additionally, a website has been developed to allow Weed Management Area (WMA) partners, landowners, and the general public to: report early invaders, stay informed about WMA activities, and follow links about invasive weeds and control methods. Please visit the MSWMA [website](#) for more information.

Some priority weed occurrences arise on private lands. The Rapid Response/Bay Area Early Detection Network ensures that these habitats are not left out of the solution, and also connects the MSWMA with ranchers, farmers, and private landowners. For example, the Department has been working closely with the ranchers in the Chileno Valley to help coordinate efforts and provide resources to manage and eradicate woolly distaff thistle. Over the past several years distaff has rendered hundreds of acres of pasture and rangeland unusable. Many different methods are available to manage and eradicate distaff, including mowing, burning, hand pulling, over seeding, fertilizing, herbicide applications, etc.

Meetings on Distaff Thistle have been held with many different stakeholders, including ranchers, Marin County Farm Bureau, Marin Agricultural Land Trust (MALT), Marin Resource Conservation District (MRCD), Marin County Department of Agriculture, and others.

Information about the larger Bay Area Early Detection Network can be found at: <http://baedn.org/>

The Marin County Board of Supervisors has adopted a weed policy to discourage the import, sale or cultivation of non-native invasive plants. For a list of these plants, please visit our [website](#).

## Glassy-Winged Sharpshooter

The Glassy-Winged Sharpshooter (GWSS) name was changed from *Homalodisca coagulata* to *Homalodisca vitripennis*. This serious pest to California agriculture was first observed in the state 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 inspects all incoming nursery plant shipments from infested California counties. In 2010 a total of 1,274 shipments were inspected for GWSS, with no finds. Detection traps placed throughout the county are also monitored.

## Sudden Oak Death

Marin County continues to be infested with Sudden Oak Death (SOD), the disease caused by the pathogen *Phytophthora ramorum*. Increased infestations have been detected in West Marin. Tree mortality in wildland and urban/wild land interface areas causes dramatic changes in the landscape, affecting ecosystems, increasing fire and safety hazards, and decreasing property values.

*P. ramorum* hosts include native woodland trees and understory plants, and ornamental nursery plants. Currently there are over 100 native and ornamental hosts; new hosts continue to be found and added to the state and federal quarantines.

On oaks, *P. ramorum* causes potentially lethal trunk cankers; on other hosts it causes a rarely lethal leaf or twig blight. Tanoaks may have both trunk cankers and leaf dieback. Unlike oaks, some hosts (i.e. California bay laurel) are not killed by this pathogen; instead these hosts are a vector, allowing inoculum to spread through natural or artificial means (rainwater, soil, infested nursery stock) under moist conditions.

The phosphonate product Agri-Fos<sup>®</sup> continues to be the only registered product for control of *P. ramorum* on oaks. It works best as a preventative by stimulating the tree's natural defense system to fight the disease.

The California Oak Mortality Task Force (COMTF) was established in 2000 to research and understand SOD. More information, including diagnostic guides and management recommendations may be found at [www.suddenoakdeath.org](http://www.suddenoakdeath.org).

*Ghost Oak*  
by  
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## Light Brown Apple Moth

In early 2007, Light Brown Apple Moth (LBAM), *Epiphyas postvittana*, was confirmed in Alameda County, California. This represented the first time LBAM had been detected in the contiguous 48 States. Currently the infestation occupies 15 counties, compared to 18 counties in 2009 and 14 counties in 2008.

A mature LBAM female can deposit 300 – 1,500 eggs before in their lifetime. Each generation lives approximately 6 – 7 weeks. The eggs of LBAM are white to pale green, flat and oval, and are laid in mass with eggs slightly overlapping other eggs (resembling fish scales), and are laid on the upper leaf surface. The larvae may be found inside furled leaves. LBAM constructs leaf rolls (nests) by webbing together leaves, a bud and one or more leaves, leaves and fruit, or by folding individual mature leaves. Fully grown larvae are about 0.2 to 0.4 inch long, light green in color with a light brown head. Pupae are red-brown in color, or may appear greenish when newly developed, and ½ inch long. Adult LBAM is light brown in color, yellowish with varying amounts of darker brown. Female wingspan is up to 3/4 inch; color may include a darker brown spot on the wing. Males have a smaller wingspan of 1/4 - 3/8 inch, color may include a darker red-brown band across the folded wings. Male moth wings fold upward on the front edge (magnification may be required to see fold).

This moth species is not native to the United States and therefore has no known predators or parasites here to naturally reduce populations.

Other countries and States want to keep this pest out. Some foreign countries have enacted quarantines and restrictions on crops and plants grown in the 15 counties infested with LBAM. LBAM is not established in the rest of the lower 48 states, these states could impose restrictions on plant, fruit, and vegetable movement from California. Quarantines, and added restrictions, adversely impact the marketing of California agricultural and horticultural products.

Marin County, working in cooperation with the CDFA/USDA LBAM Cooperative Program, continued management and control of LBAM through servicing of traps, education of nursery owners and farmers, and visual inspections of nurseries, vineyards and farms located in the quarantine boundary.

There were several larval finds at regulated establishments in 2010; regulatory procedures were followed to prevent the spread of the larvae. Nurseries are establishing “Best Management Practices” as a preventative measure against further larval finds.

As of this writing, approximately 11,200 male Light Brown Apple Moths had been captured in traps placed throughout Marin County. More information may be found at CDFA's LBAM [website](#).



Note: this is not the light brown apple moth.

# *Farmers' Markets of Marin County*

The purpose of farmers' markets is to allow local producers to sell their certified commodities directly to the public. There are 33 certified producers that have been issued certificates in Marin County. The following nine Farmers' Markets (two located at the Marin Civic Center) have been certified by the Agricultural Commissioner to market local and regional produce in Marin County.

<p><b>Civic Center</b> San Rafael Thursdays 8:00 am – 1:00 pm Sundays 8:00 am – 1:00 pm Open All Year</p>	<p><b>Corte Madera</b> Corte Madera Town Center Wednesdays 12:00 – 5:00 pm Open All Year</p>	<p><b>Downtown San Rafael</b> Fourth Street, San Rafael Thursdays 6:00 – 9:00 pm April – September</p>
<p><b>Fairfax</b> Bolin Park, Downtown Fairfax Wednesdays 4:00– 8:00 pm May – September</p>	<p style="font-size: 2em;">★</p>	<p><b>Marinwood Community</b> Marinwood Avenue. Saturdays 9:00 am - 2:00 pm <b>Open All Year</b></p>
<p><b>Mill Valley</b> E. Blithedale Ave. @ Lomita Dr. Fridays 9:00 am – 2:00 pm Open All Year</p>	<p><b>Old Town Novato</b> Downtown, Novato Tuesdays 4:00 pm – 8:00 pm May – September</p>	<p><b>Point Reyes</b> Toby's Feed Barn (11250 Hwy1) Point Reyes Station Saturdays 9:00 am – 1 pm June – November</p>



*Gentlemen trading goods in Sausalito, circa 1888. Photographer: George Reed. Courtesy of The Bancroft Library. University of California, Berkeley.*

# *Weights & Measures*

The Weights and Measures program ensures honesty and integrity in commercial transactions when products are sold by weight, measure, count or time. This is accomplished through the continuous and systematic inspection of all equipment used to weigh or measure commodities. Weights and Measures inspectors test: taximeters, stores scales, gasoline pumps, fabric and cordage meters, electric meters, livestock and animal scales, vehicle scales, packaged products for stated net contents and also conducts barcode scanner inspections to ensure accurate product pricing. Overall, every transaction involving the exchange of goods by volume, count, or weight is affected in a vital way by some form of weights and measures.

## **Price Verification**

The emergence and application of scanner/point-of-sale systems technology at retail check out stands has provided retailers substantial benefits concerning the tracking of sales and inventory; however, the remote location of the price database and its maintenance has increased price discrepancies between an item's advertised price on the store shelf and what the consumer is charged when checking out at the register. It is unlawful to charge at the time of sale a price that is more than the price that is advertised or posted. Pursuant to California Business and Professions Code sections 12103.5, 12024.2, and 12024.6, the purpose of this Chapter is to ensure that the advertised or posted price of a commodity is the price charged for that commodity. Business and Professions Code Section 13350 mandates that county weights and measures departments perform price verification inspections to regulate pricing and price representation. Beginning in January 2007 Marin County Department of Agriculture/Weights and Measures began routinely inspecting the approximately 455 different locations that use the estimated 1,943 scanner/point-of-sale devices in Marin County. Previously these inspections were only done as a result of a complaint.

**Consumer Tip:** By law, the shelf or item price is the "correct" price and that is the price you are entitled to when you pay at the register. Please check your receipt: if you have been overcharged at the register, please call our Department.



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