



2015 Marin County Livestock & Crop Report

Requests for accommodations may be made by calling (415)473-6700 (Voice), (415)473-3232 (TTY) or by e-mail at SParnay@marincounty.org. Copies of documents are available in alternative formats, upon request.

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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 Livestock and Crop Report for 2015. This report is a summary of counts, acreage, yields, and gross value of agricultural production in Marin County. The 2015 gross value of all production is estimated to be the highest value ever recorded at \$111,061,000. This represents an increase of approximately \$10,108,400, which is 10 percent higher than the reported 2014 total agricultural production value of \$100,952,600. The report represents gross returns to the producer and does not indicate actual net profit.

Milk is the long-standing premier commodity for Marin, accounting for 40 percent of the crop report's total value. Production of both organic milk and conventional remained relatively steady. The average Market Milk Price was significantly up for organic milk, and significantly down for conventional milk in 2015. While milk production remained steady, the value increased approximately \$6,066,000.

Poultry production increased by \$5,249,000, or 44% from 2014 to 2105. This change in value was due to increased production and higher returns on eggs and meat. Wine Grape yields suffered greatly in Marin County in 2015. Growers reported lower yields due to the weather, including reports of no wine grape harvest at all from some vineyards. A reported harvest of less than one-third the tonnage of the previous year's resulted in a 51 percent decrease in wine grape value, or \$356,000. Marin County's Aquaculture revenue decreased by \$4,200,000, or 40 percent, over recorded figures for 2014. This decrease in value represents, in part, a significant decrease in production between 2014 and 2015.

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, especially Kyle Lindstrom, Ellen Breazeale, Scott Wise and Jeff Stiles, for their help in producing this report.

Respectfully submitted,

Stacy K. Carlsen
Agricultural Commissioner
Director of Weights and Measures

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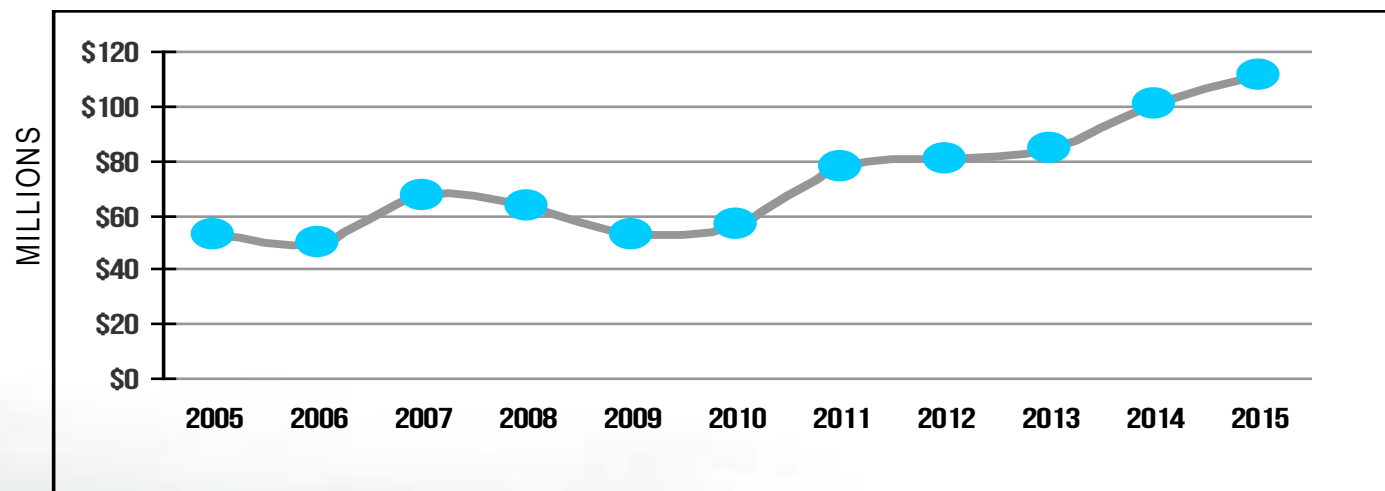
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AGRICULTURAL PRODUCTION SUMMARY

TEN-YEAR SUMMARY



The gross value of all agricultural production in the County of Marin for 2015 is

\$111,061,000





This represents an increase of approximately

10%

Compared to the gross value of 2014, which was approximately \$100,919,600.





LIVESTOCK & AQUACULTURE

	Head	\$ / Head	Dollar Value
 9% Cattle	13,972	\$1,596	\$22,302,000
 -22% Sheep	13,757	\$1,483	\$20,402,000
 44% Poultry	9,824	\$158	\$1,552,000
 -40% Aquaculture	10,111	\$196	\$1,982,000
			\$17,175,000
			\$11,926,000
			\$6,400,000
			\$10,600,000
			\$47,429,000
			\$44,910,000

Poultry figures include poultry fryers and chicken eggs for consumption.




Aquaculture figures include oysters, mussels and clams.

LIVESTOCK PRODUCTS

	Production	\$ / Unit	Unit	Dollar Value
 22% Milk (Organic)	1,096,797	\$37.50	CWT	\$41,130,000
 -26% Milk (Conv.)	1,083,148	\$31.00	CWT	\$33,578,000
 8% Wool	274,199	\$15.38	CWT	\$4,217,000
	270,787	\$21.06	CWT	\$5,703,000
	58,943	\$0.58	lbs	\$34,000
	44,500	\$0.70	lbs	\$31,600
				\$45,381,000
				\$39,312,600




2014 data has been revised to reflect rounding conventions. All totals are rounded. 2015 data is presented in red above; the 2014 data is in gold.

FIELD CROPS

	Harvested Acres	Total Tons	\$ / Ton	Dollar Value
 69% Hay **	1,600	5,915	\$215	\$1,272,000
 -15% Silage	1,712	3,923	\$192	\$753,000
	1,669	13,488	\$40	\$540,000
	1,441	14,165	\$45	\$637,000
				\$10,934,000
 18% Pasture	154,000		\$71	\$10,934,000
	154,000		\$60	\$9,240,000
				\$12,746,000
				\$10,660,000



FRUITS, VEGETABLES & NURSERY

	Harvested Acres	Total Tons	Dollar Value
 -4% Fruits & Vegetables	309		\$4,793,000
 -51% Wine Grapes	424	103	\$4,990,000
	175	325	\$347,000
	175		\$703,000
 -2% Nursery Products	7.61		\$365,000
	7.23		\$374,000
			\$5,505,000
			\$6,067,000

** Values include Grass Hay, Oat Hay, Oat Seed, and Vetch Seed. Following the National Agricultural Statistics Service for Acreage Harvested, acreage harvested and planted repeatedly during the year is counted each time. Harvested acreage for 2014 Fruits & Vegetables represents 226 actual acres.

SUSTAINABLE AGRICULTURE PROGRAM OVERVIEW

PEST DETECTION

Pest prevention encompasses several activities aimed at preventing 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 pathways of pest entry into the county, including nurseries and points of entry, such as UPS and FedEx package terminals.

Pest detection is the systematic search for exotic pests outside 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. The cost to keep a pest out of specific regions is a small investment compared to trying to eradicate a pest once it becomes established. For every dollar spent on pest detection, about twenty dollars are spent on eradication efforts.

INTEGRATED PEST MANAGEMENT

Integrated pest management (IPM) is a common-sense approach to pest management that uses various methods and tools to control pests. IPM programs focus on preventing pest problems through cultural and biological measures, although pesticides may be part of an IPM program. The goal is to eliminate or reduce pesticide applications wherever possible and take reasonable measures to ensure that the long-term prevention or suppression of pests has minimal negative impact on human health, non-target organisms, and the environment.

PROTECTION OF THE ENVIRONMENT

The Department operates a Pesticide Use Enforcement program that includes a permitting process for restricted pesticides 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-related illness investigations. The ultimate goal of this program is to ensure the safe and effective use of pest control methods in order to protect public health and the environment, while strongly promoting the production of healthy, safe food and fiber through sustainable practices.

LIVESTOCK PROTECTION PROGRAM

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



MARIN ORGANIC CERTIFIED AGRICULTURE (MOCA)

The Marin County Agricultural Commissioner's Office is accredited by the United States Department of Agriculture (USDA) as an official organic certification agency.

Marin Organic Certified Agriculture (MOCA) serves the local agricultural community growers who are employing organic farming practices. Organic production systems strive to achieve agro-ecosystems that are ecologically, socially, economically, and environmentally sustainable. Organic farming emphasizes a greater cooperation with nature without reliance on synthetic inputs.

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 primary responsibility 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 the production of organic value-added products by Marin's family farms.

In 2015, the number of MOCA certified operations totaled 55, including 2 processors; 41 of the operations are located within Marin County. The remaining 12 operations are located in Sonoma County, with the exception of two in Riverside County (managed by Marin County operations to ensure a year-round supply of fresh produce in the off season). All organic producers in California must register in their principal county of operation. In 2015 there were 69 registered organic producers in Marin County, farming 40,676 acres, which includes 40,450 acres in pasture, producing a total gross value of approximately \$54,046,007.



PEST PREVENTION PROGRAMS

PEST EXCLUSION

In 2015, Marin County inspectors conducted 1,904 incoming plant quarantine inspections.

Plant shipments were monitored at Federal Express, UPS, nurseries, ethnic markets, aquatic supply stores, and post entry quarantine sites.

The Department performed 48 Gypsy Moth inspections of household goods from infested states, as well as 1,520 Glassy-Winged Sharpshooter inspections on plant material from infested California counties.

Five rejections of plant material were made to protect Marin's agriculture and environment.

PEST DETECTION

In 2015, inspectors from Marin and the California Department of Food and Agriculture placed and serviced 704 traps for exotic insect pests.

The targeted pests included: Mediterranean Fruit Fly, Oriental Fruit Fly, Melon Fly, Gypsy Moth, Japanese Beetle, Glassy-Winged Sharpshooter (GWSS), Light Brown Apple Moth, and False Codling Moth.

Traps are strategically placed within the county on or near preferred hosts. For example, GWSS traps were placed in nurseries, vineyards, and urban areas; Mediterranean Fruit Fly traps were placed in fruit trees; Gypsy Moth traps were placed on hardwood trees; and Japanese Beetle traps were placed in urban landscaped areas.

BIOLOGICAL CONTROL

Biological pest control is the use of pests' natural enemies to help suppress pest populations to economically and environmentally acceptable levels.

Once the agent becomes established, control is generally 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	BIOLOGICAL AGENT
Gorse	Gorse Mite, Seed Weevil
Bull Thistle	Bull Thistle Gall Fly
Yellow Star Thistle	Peacock Fly
Scotch Broom	Stem Boring Moth
Ash White Fly	Parasitic Wasp
Italian Thistle	Seed Weevil
Purple Star Thistle	Seed Weevil
Klamath Weed	Beetle
Olive Fruitfly	Parasitic Wasp

GLASSY-WINGED SHARPSHOOTER

The Glassy-Winged Sharpshooter (GWSS), *Homalodisca vitripennis*, is a very serious threat to California agriculture. First observed in the state around 1990 and now found throughout Southern California and portions of the San Joaquin Valley, GWSS is a particular threat to vineyards due to its ability to spread *Xylella fastidiosa*, the bacterium that causes Pierce's disease in grapevines. Pierce's disease is lethal to grapevines and significant resources are committed annually to find effective treatments. GWSS 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, Department staff inspect incoming nursery plant shipments containing GWSS hosts from infested California counties. In 2015, a total of 1,520 shipments were inspected for GWSS, with two adult finds which turned out to be isolated hitchhikers. Detection traps are strategically placed to monitor for this unwanted pest, keeping Marin County free from GWSS.

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. The infestation has affected coastal counties throughout central and southern California to varying degrees.

LBAM is not established in the rest of the lower 48 states. These states and other countries want to keep this pest out and have enacted quarantines and restrictions on plant, fruit, and vegetable movement from California, which adversely impact the marketing of California agricultural and horticultural products.

Marin County, working in cooperation with the CDFA/USDA LBAM Cooperative Program, continues to manage and control LBAM through detection traps, visual inspections of nurseries located in the quarantine boundary, and education of nursery owners and farmers. Production nurseries that ship plants out of the quarantine areas are required to follow "Best Management Practices", including regular monitoring for LBAM. More information on LBAM may be viewed at www.cdfa.ca.gov/lbam

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.

Phytophthora 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 leaf or twig blight, which is rarely lethal. 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 act as a vector, allowing inoculum to spread through natural or artificial means (i.e., rainwater, soil, infested nursery stock) under moist conditions.

Prevention is the only treatment to protect trees from *P. ramorum*. Best preventative practices include keeping trees healthy so they maintain their natural defenses, pruning overstory California Bay Laurels, and strategically utilizing phosphonate treatment products.



Glassy-Winged Sharpshooter (*Homalodisca vitripennis*)

The following additional pests were intercepted in Marin County in 2015:

SCIENTIFIC NAME	COMMON NAME/RATING	SCIENTIFIC NAME	COMMON NAME/RATING
<i>Bagrada hilarus</i>	Bagrada bug (B)	<i>Diaspis boisduvalii</i>	Citrus mealybug (C)
<i>Epiphyas postvittana</i>	Light brown apple moth (A)	<i>Plantynota stultana</i>	Omnivorous leafroller (C)
<i>Diapridae lantaniae</i>	Lantania scale (C)	<i>Siphanta acuta</i>	Torpedo bug (B)
<i>Diaspis coccois</i>	Armored scale (C)	<i>Pseudococcus longispinus</i>	Long tailed mealy bug (C)
<i>Pseudococcus viburni</i>	Obscure mealy bug (C)	<i>Phyllocnistis citrella</i>	Citrus leaf miner (C)
<i>Coccus hesperidum</i>	Brown soft scale (C)	<i>Aleurodicus dispersus</i>	Spiraling white fly (C)
<i>Saissetia coffeae</i>	Hemispherical scale (C)		

INVASIVE WEED MANAGEMENT

INVASIVE WEED MANAGEMENT STRATEGY

Over the past two decades, noxious and invasive weeds have become an extremely serious, challenging, and widespread issue in Marin County. Several different species of injurious weeds have become established in Marin County and have rendered thousands of acres of pastureland, rangeland, and natural areas unusable, increased the risk of wildfires, and successfully outcompeted numerous native plant species. It will take the combined effort, cooperation, and collaboration of numerous organizations, ranchers, and private landowners to successfully manage these damaging weeds. The Department has worked diligently to forge productive partnerships and build confidence with industry, community groups, and various other interested stakeholders through a collaborative and inclusive approach on a long-term strategy to manage noxious weeds.

The centerpiece of a longterm approach to noxious weed management will be a focus on education and outreach to landowners about best land management practices (e.g., grazing, soil health,

native forage restoration, early detection and rapid response to invasive weeds, carbon sequestration, etc.).

These land management practices will help protect productive land that is currently free of invasive weeds and will also fortify soil health, increase soil water retention capabilities, and encourage biodiversity. Landowners will be provided practical, proven Integrated Pest Management (IPM) solutions to control existing invasive weed populations through effective land management practices, and a significant emphasis will be placed on early detection and rapid response. Education and outreach will also be provided to the general public and other organizations and agencies.

In 2013, the department drafted a proposed 10-year invasive weed management plan, which has not yet been presented to the Marin County Board of Supervisors. This plan received public support from 24 local, state, and federal organizations and agencies, and can be viewed at <http://www.marincounty.org/depts/ag/weed-plan>

MARIN/SONOMA WEED MANAGEMENT AREA

MSWMA, the Marin/Sonoma Weed Management Area group, includes representatives from federal, state, county and city agencies, private industry, and landowners. MSWMA's goals include improving the effectiveness of local weed management efforts, increasing public awareness of invasive weeds, advancing responsible land stewardship practices, and working collaboratively with partner organizations by sharing resources and knowledge to manage and/or eradicate invasive weed populations. The MSWMA helps control weeds across land ownership boundaries by uniting landowners with public agencies and providing an opportunity to share resources in mapping and planning. Visit the Marin/Sonoma Weed Management Area website: <http://marinsonomawma.blogspot.com>



FARMERS' MARKETS

The purpose of farmers' markets is to allow local producers to sell their certified commodities directly to the public. Marin County certificates were issued to 31 producers in 2015. The following 11 farmers' markets were certified by the Agricultural Commissioner to market local and regional produce in Marin County. Check our website at marincounty.org/depts/ag to stay up to date with current market schedules.

CIVIC CENTER

Thursdays 8:00 pm - 1:00 pm
Sundays 8:00 pm - 1:00 pm
Open all year

FAIRFAX

Peri Park
Wednesdays 4:00 pm - 8:00 pm
May - September

MARIN COUNTRY MART

Larkspur Landing Circle, Larkspur
Saturdays 9:00 am - 2:00 pm
Open all year

POINT REYES

Toby's Feed Barn (11250 Hwy 1)
Saturdays 9:00 am - 1:00 pm
June - November

CORTE MADERA

Corte Madera Town Center
Wednesdays 12:00 pm - 5:00 pm
Open all year

FAIRFAX

Sir Francis Drake @ Broadway
Sunday 10:00 am - 2:00 pm
Open all year

MILL VALLEY

E. Blithedale Ave @ Ashford Drive
Fridays 9:30 am - 2:30 pm
Open all year

TAM VALLEY

Tamalpais Community Center, Mill Valley
Tuesdays 3:00 pm - 7:00 pm
May - November

DOWNTOWN SAN RAFAEL

Fourth Street, San Rafael
Thursdays 6:00 pm - 9:30 pm
April - September

MARINWOOD COMMUNITY

Marinwood Plaza
Saturdays 9:00 am - 1:00 pm
Open all year

NOVATO

Grant Avenue, Novato
Tuesdays 4:00 pm - 8:00 pm
May - September

