

COUNTY OF
MARIN

DEPARTMENT OF AGRICULTURE,
WEIGHTS AND MEASURES

2017 Livestock & Crop Report



CONTENTS

- 1 Agricultural Commissioner's Letter
- 2 Agricultural Production Summary
- 3 Ten Year Summary
- 4 Livestock & Aquaculture
- 4 Livestock Products
- 5 Field Crops
- 5 Fruits, Vegetables & Nursery
- 6 Sustainable Agriculture Program Overview
- 8 Pest Prevention Programs
- 10 Invasive Weed Management
- 12 Marin Organic Farming & Ranching
- 13 Marin Certified Farmers' Markets

STAFF

Agricultural Commissioner
Director of Weights & Measures
Stacy K. Carlsen

Deputy Agricultural Commissioner
Deputy Director of Weights & Measures
Stefan Parnay

Supervising Agricultural/
Weights & Measures Inspector
Scott Wise

Agricultural/Weights & Measures Inspectors

Hugo Abaurre	Jeffrey Stiles
Emmett Brady	Susan Ventura
Johanna Good	Dann Walters
Allison Klein	Raoul Wertz

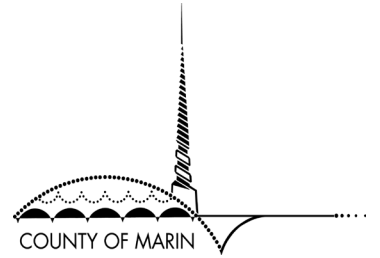
Senior Agricultural Program Assistant
Eric Richardson

Administrative Services Associate
Tanya Nelson

Office Assistants
Mary Wahlberg
Ellen Breazeale

DEPARTMENT OF AGRICULTURE • WEIGHTS & MEASURES
1682 NOVATO BLVD., SUITE 150-A, NOVATO, CA 94947
T: (415) 473-6700 F: (415) 473-7543

Karen Ross, Secretary
California Department of Food & Agriculture
and
Marin County Board of Supervisors
Damon Connolly, District 1
Katie Rice, District 2
Kathrin Sears, District 3
Dennis Rodoni, District 4
Judy Arnold, District 5



Stacy K. Carlsen, Commissioner/Director
Stefan Parnay, Deputy Commissioner/Director

In accordance with the provisions of Section 2279 of the California Food and Agricultural Code, I am pleased to submit the 2017 Annual Livestock and Crop Report for Marin County. This publication is a summary of counts, acreage, yields, and gross value of all agricultural production in Marin County.

The total gross value of agricultural crops and products in 2017 was \$87,198,000. This represents a decrease of approximately \$9,308,000, or 10% less, compared to the 2016 total gross value of \$96,506,000. It should be emphasized that the values stated in this report represent gross returns and do not indicate actual net profit.

Despite a decrease in value of 21% from the previous year, Milk continues to remain the top commodity for Marin at \$34,153,000, and 39% of the total gross value. This \$8,982,000 reduction in value accounts for the majority of the 10% reduction in total gross value of agricultural crops and products in 2017.

Production of both organic and conventional milk decreased 4.8% in 2017. The average market milk price was down significantly for organic milk, and slightly for conventional milk in 2017. Organic dairy farmers have attributed the price drop to a surplus of organic milk being produced as more dairy farmers have entered the organic market.

The second, third, and fourth ranking commodities in 2017 were Poultry at \$17,816,000, Pasture at \$10,934,000, and Cattle at \$10,784,000. The values of these commodities remained relatively stable compared to the previous year with Poultry down 7%, Pasture down 1%, and Cattle up 2%.

The gross value of Silage dropped 23% to \$499,000, due to a decrease in the total tons harvested as well as a drop in price. Nursery Products decreased 33% to \$243,000 due to fewer acres in production. The gross value of Fruits & Vegetables increased 17% to \$3,987,000. Aquaculture values increased 14% due to increased oyster and clam production. Marin County's Wine Grape production continues to improve after unfavorable conditions in 2015, with the number of producing acres and total tonnage harvested up from 2016. The gross value of Wine Grapes in 2017 was \$894,000, up 3% from 2016, and representing 195 harvested acres.

My appreciation goes to the many growers, producers, individuals and organizations for their cooperation in providing the information necessary for this report. I also thank the members of my staff, especially Allison Klein, for their help in producing this report.

Respectfully submitted,

Stacy K. Carlsen
Agricultural Commissioner
Director of Weights & Measures

If you require accommodations to view this document, or would like to request the document in alternate formats, contact Stefan Parnay at (415) 473-6700, TTY (415) 473-3232, or sparnay@marincounty.org.

Cover photo: Windrows west of Novato by Scott Wise



Agricultural Production Summary

TEN YEAR SUMMARY

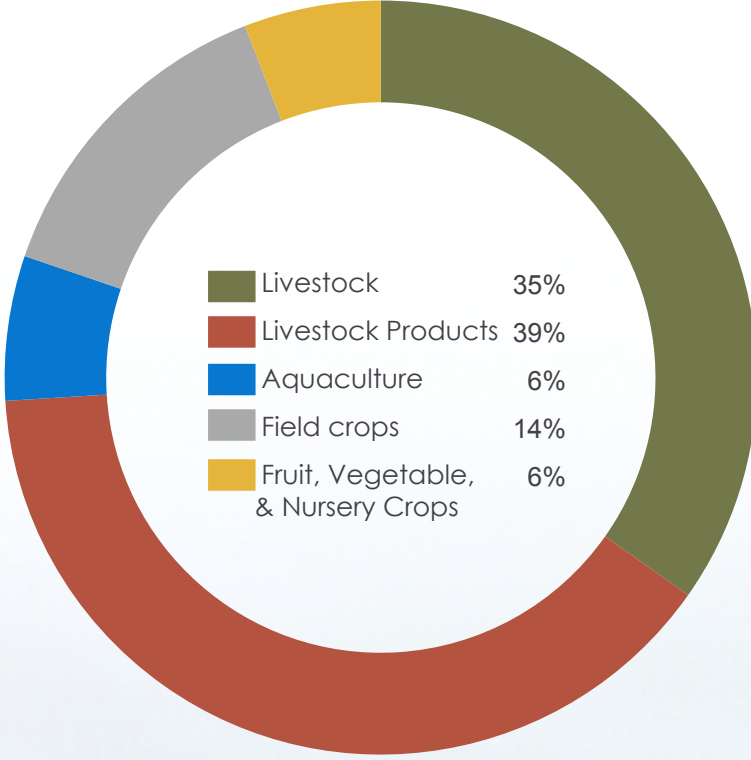
The gross value of all agricultural production in Marin County for 2017 is approximately

\$87,198,000

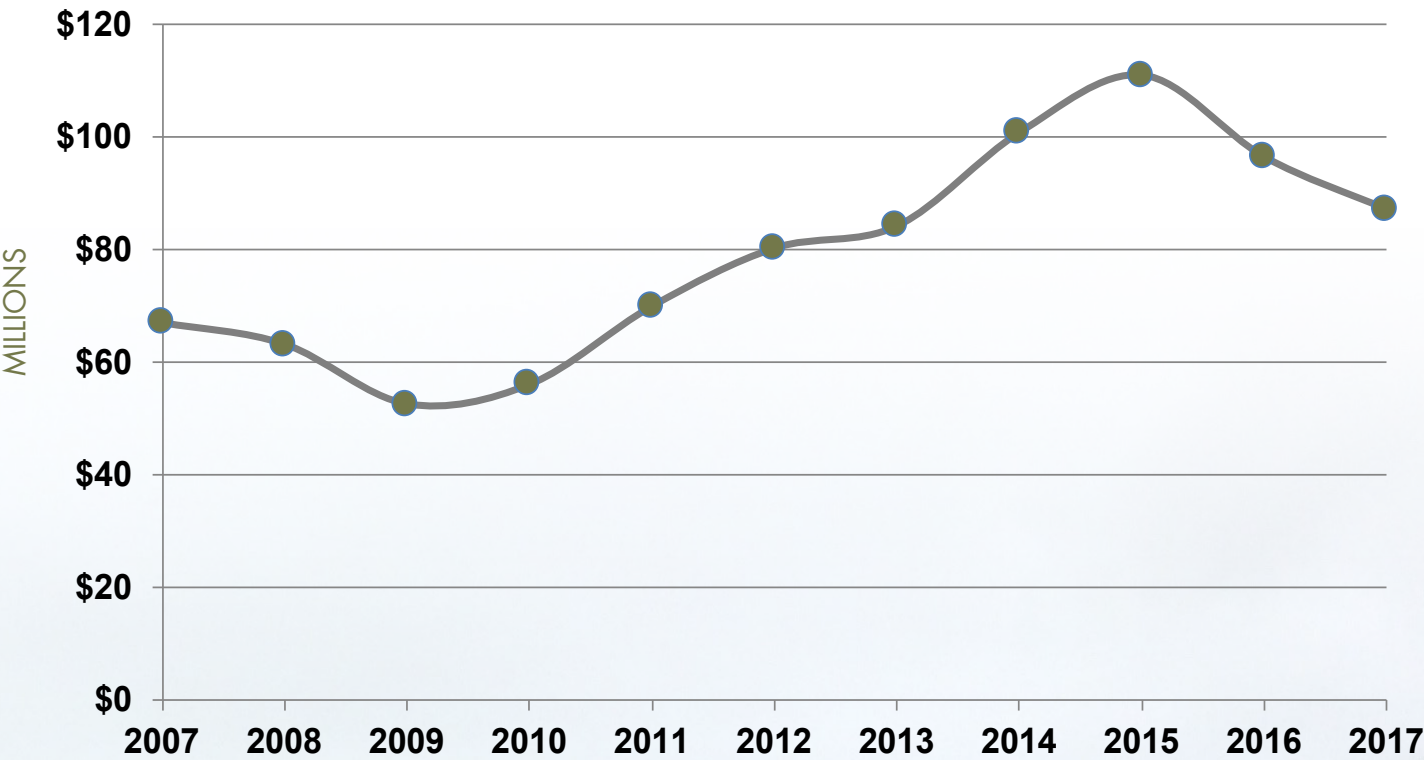
which represents a change of approximately

-10%


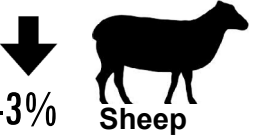


compared to the gross value of 2016, which was approximately \$96,506,000.



Percentage of total production value






Livestock & Aquaculture

	Head	\$ / Head	Dollar Value
 2% Cattle	14,398	\$749	\$10,784,000
	14,562	\$724	\$10,543,000
 -3% Sheep	9,536	\$182	\$1,735,000
	10,074	\$178	\$1,793,000
 -7% Poultry			\$17,816,000
			\$19,177,000
 14% Aquaculture			\$5,414,000*
			\$4,760,000
Total Value:			\$35,749,000
			\$36,273,000

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)	1,010,578	\$30.02	CWT	\$30,338,000
	1,062,252	\$36.85	CWT	\$39,144,000
 -4% Milk (**Conv.)	252,644	\$15.10	CWT	\$3,815,000
	265,563	\$15.03	CWT	\$3,991,000
 -2% Wool	58,320	\$0.86	LBS	\$50,000
	60,441	\$0.84	LBS	\$50,800
Total Value:				\$34,203,000
				\$43,186,000

*Aquaculture value based on report prepared by California Department of Fish and Wildlife.

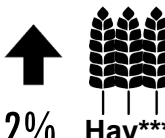

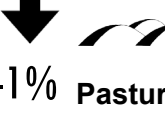
**"Conv." means conventional

Figures may not add due to rounding.

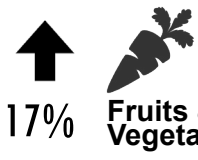

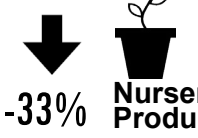
2017 data is presented in blue above; the 2016 data is presented in green.



Field Crops

	Acreage	Total Tons	\$ / Ton	Dollar Value
 2% Hay***	1,775	4,331	\$159	\$689,000
	2,533	4,773	\$141	\$673,000
 -23% Silage	1,524	8,749	\$57	\$499,000
	1,558	9,510	\$68	\$647,000
 -1% Pasture				
	Harvested Acreage		\$ / Acre	Dollar Value
	154,000		\$71	\$10,934,000
	154,000		\$72	\$11,088,000
Total Value:				\$12,122,000
				\$12,408,000

Fruits, Vegetables & Nursery

	Acreage	Total Tons	Dollar Value
 17% Fruits & Vegetables	440		\$3,987,000
	410		\$3,412,000
 3% Wine Grapes	195	291	\$894,000
	182	250	\$867,000
 -33% Nursery Products	7.94		\$243,000
	9.43		\$360,000
Total Value:			\$5,124,000
			\$4,639,000

*** 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 2017 Fruits & Vegetables represents 316 actual acres.

Sustainable Agriculture Program Overview

PEST PREVENTION & 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 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

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.

Additionally, the Department recommends Integrated Pest Management (IPM) strategies for long-term pest control such as the use of cultural, biological, and mechanical control methods (with chemical control as a last option).

INTEGRATED PEST MANAGEMENT

Integrated pest management (IPM) is a common-sense approach to pest management that uses a variety of 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.

LIVESTOCK PROTECTION PROGRAM

The Marin County Board of Supervisors continues to support and appropriate cost-share funds for the Livestock Protection Program to eligible ranchers who qualify for non-lethal depredation improvements and/ or practices. Recognized non-lethal control methods include the use of protection animals (e.g., livestock guardian dogs, llamas, etc.), electric fencing, scare devices, and herd shepherding, which are eligible for cost-share funds to support ranchers. The Department administers verification inspections for cost-share funding for ranchers participating in this program.

Over the past year, 16 ranchers participated in the Livestock Protection cost-share program to help build and repair fences, purchase and support protection animals, and use scare devices to protect animals from predators. Protected animals included sheep, poultry, goats, cattle, buffalo, and alpaca. The total funds expended to support our ranching community from July 2017 to June 2018 was \$45,234.





Pest Prevention Programs

PEST EXCLUSION

In 2017, inspectors conducted 1,512 incoming plant quarantine inspections. Plant shipments were monitored at FedEx, UPS, nurseries, aquatic supply stores, and post-entry quarantine sites. The Department performed 29 Gypsy Moth inspections of household goods from infested states, as well as 1,348 Glassy-Winged Sharpshooter inspections on plant material from infested California counties. One rejection of plant material was made to protect Marin's agriculture and environment.

PEST DETECTION

In 2017, inspectors from the Marin County Department of Agriculture and the California Department of Food and Agriculture placed and serviced 1,437 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 Asian Citrus Psyllid. Traps are strategically placed within the county on or near preferred hosts. For example, GWSS traps were placed in nurseries 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 control agent becomes established, management 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

The following pests were intercepted in Marin County in 2017:

SCIENTIFIC NAME	COMMON NAME	RATING
<i>Epiphyas postvittana</i>	Light brown apple moth	A
<i>Pseudaulacaspis pentagona</i>	White peach scale	A
<i>Pulvinaria psidii</i>	Green shield scale	B
<i>Ceroplastes cirripediformis</i>	Barnacle scale	C

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 host plants from infested California counties. In 2017, a total of 1,348 shipments were inspected for GWSS, with no finds. Detection traps are strategically placed throughout the county to monitor for this unwanted pest.

SUDDEN OAK DEATH

Marin County continues to be infested with Sudden Oak Death (SOD), the disease caused by the pathogen *Phytophthora ramorum*. Due to above-average rainfall in recent years, increased infestations have been detected in several coastal counties, including Marin. Mortality in tanoak and manzanita has been recorded in sections of the Mt. Tamalpais watershed, with a noticeable absence of bay laurel, inferring that tanoak and possibly manzanita have caused the inoculum to spread.

Tree mortality in wildland and urban/wildland interface areas causes dramatic changes in the landscape, affecting ecosystems, increasing fire and safety hazards, and decreasing property values.

P. ramorum hosts include various native woodland trees and understory plants, as well as assorted ornamental nursery plants. State and federal quarantines regulate the movement of host nursery stock, and ongoing research is being conducted to help production nurseries mitigate the risk of spread.

On certain oaks such as Coast Live Oak, *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. For more information about diagnosis, distribution, and best management practices, please visit:

<http://www.suddenoakdeath.org>



Invasive Weed Management

JAPANESE KNOTWEED ERADICATION PROGRAM

Japanese knotweed (*Fallopia japonica*) is currently threatening parts of Marin County. First documented in the winter of 2011 along Lagunitas Creek, Japanese knotweed now occurs on state, federal, and private lands in and along both Lagunitas and San Geronimo Creeks.

This invasive plant is classified as an A-rated pest by the California Department of Food and Agriculture, which is the highest and most serious pest rating. Japanese knotweed is considered one of the top 10 most aggressive, destructive and invasive plants in the world! Small patches of knotweed can quickly grow to infest large areas of land in and along waterways, over time making creek banks more vulnerable to erosion, clogging waterways, and reducing habitat quality for fish and wildlife. It's an aggressive colonizer that outcompetes native vegetation by emerging early, growing fast, and preventing seedling regeneration. It's even strong enough to penetrate concrete. As a result, managers are not only concerned about the ecological threat this species poses, but also about the damage it can do to homes and property.

Much great work has been done on state and federal lands, and some private lands to manage and treat these knotweed populations. However, in order to eradicate this species in Marin, coordinated action must be taken before the infestation becomes more widespread.

Over the next year, the Department, Farm Advisor, and other local organizations intend to engage all private landowners within the San Geronimo Creek area, to increase their knowledge and understanding of Japanese knotweed and facilitate their participation in surveys, management, and monitoring of knotweed patches on their respective properties. The goal of this work in collaboration with homeowners and local, state, and federal agency representatives is the complete removal of Japanese knotweed from the watersheds by synchronizing management on public and private lands.



MARIN/SONOMA WEED MANAGEMENT AREA

The Marin/Sonoma Weed Management Area (MSWMA) is a cooperative organization fighting weeds and invasive plants in Marin and Sonoma Counties. Established in 1999, the 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 at <http://marinsonomawma.blogspot.com>.

Some high priority invasive weeds are found on private lands. The Rapid Response/Bay Area Early Detection Network (<http://baedn.org/>) connects MSWMA with ranchers, farmers, and private landowners to help address these infestations, with the goal of eradicating them before they become too large.

Photos (clock-wise from top of page): Japanese knotweed sprouts, and a wall of knotweed along creekbank by Eric Ettlinger of Marin Municipal Water District; Japanese knotweed penetrating concrete by King County Noxious Weed Control Program (<https://www.kingcounty.gov/services/environment/animals-and-plants/noxious-weeds/program-information.aspx>).



Marin Organic Farming & Ranching

MARIN ORGANIC CERTIFIED AGRICULTURE (MOCA)

The Marin County Department of Agriculture 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 producers who employ organic farming and ranching practices, and seek formal certification. Organic production systems strive to achieve agro-ecosystems that are ecologically, socially, economically, and environmentally sustainable. Organic farming emphasizes greater cooperation with nature without reliance on synthetic inputs.

Consumer demand for certified organic products continues to increase, with an expectation by consumers that organic products are verifiable. MOCA was established to provide a professional service to local individual and business operations engaged in the production and distribution of organically produced commodities.

The primary responsibilities of MOCA are to uphold the standards of the USDA National Organic Program, and document and verify operations' practices of sustainable agriculture. One of the most important benefits of the MOCA program is as a local resource that services the production of organic, value-added products by Marin's family farms.

In 2017, MOCA certified 53 operations as organic. Of those, 38 operations are located in Marin County, and include 11 dairies. Thirteen operations are located in Sonoma County. The remaining two operations are located in Riverside County, and are managed by Marin-based operations to ensure a year-round supply of fresh produce in the local off-season.

CALIFORNIA ORGANIC PROGRAM

All organic producers in California must register in their principal county of operation. In 2017, there were 70 registered organic producers in Marin County, farming approximately 36,554 acres, and producing a total gross value of \$66,123,269. Approximately 2,714 acres were farmed to produce organic fruits, vegetables, nursery stock, eggs, and poultry. In addition, Marin County had approximately 33,840 acres of organic pastureland.



Marin Certified Farmers' Markets

Certified Farmers' Markets are community events bringing together farmers and consumers, offering the opportunity to meet local certified producers and learn how and where food is grown. Farmers may only sell what they grow so consumers are guaranteed the food is fresh and seasonal.

Marin Certified Farmers' Markets showcase the diversity and abundance of local and regional produce. In 2017, 31 Certified Producer Certificates were issued to producers and 11 farmers' markets were certified.

Check our website at <http://www.marincounty.org/depts/ag> to stay up to date with current market schedules.

MARIN COUNTY CIVIC CENTER

Thursday 8:00 am - 1:00 pm
Sunday 8:00 am - 1:00 pm
Open all year

FAIRFAX

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

MILL VALLEY

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

TAM VALLEY

E. Blithedale Ave @ Ashford Dr
Tuesday 3:00 pm - 7:00 pm
May - November

CORTE MADERA

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

NOVATO

Behind CVS on 7th Street
Tuesday 4:00 pm - 8:00 pm
May - September

TIBURON

Main Street @ Tiburon Blvd
Thursday 3:00 pm - 7:00 pm
June - October

SAN RAFAEL

Fourth Street, San Rafael
Thursday 5:30 pm - 9:00 pm
April - September

LARKSPUR

Marin Country Mart
Saturday 9:00 am - 2:00 pm
Open all year

POINT REYES

Toby's Feed Barn
Saturday 9:00 am - 1:00 pm
June - November



Photo: fresh beets for sale at a farmers' market by Susan Ventura