Marin County

Livestock & Agricultural

Crop Report 2008
June 2009

A. G. Kawamura, Secretary
California Department of Food and Agriculture

And

Marin County Board of Supervisors
Harold C. Brown Jr., President, District 2
Susan L. Adams, District 1
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 2008. This report is a summary of counts, acreage, yields, and gross value of agricultural production in Marin County. The 2008 gross value of all production was $63,311,293. This represents a decrease of $3,821,548 or 5.7% from the 2007 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 56.2% of the crop report's total value. The average Market Milk price for 2008 was slightly lower than 2007, contributing to a decrease in overall milk value of $3,348,642 (-8.6%).

Livestock value decreased by $2,565,210, the 16.2% decrease was mainly a result of a decrease in meat chicken production. The value of wool increased by $17,389, or 82.5%. The increased value was a result of more shepherds finding value added outlets for their wool, and an increase in prices paid for ungraded wool.

Aquacultures value increased 10.9%; as production in the industry as a whole was increased.

Wine grape value decreased, however, tons harvested increased by 14.6%. Nursery crops experienced an increased value of $279,133, or 43.4% even as production acreage decreased by 84.0%. The loss of production acreage is a result of at least one nursery reporting no production for 2008, whereas the increase in value is mostly due to increased survey participation. The nursery industry in Marin County has not grown drastically in 2008; it is just being portrayed more accurately.

My appreciation goes to the many growers, 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,

Stacy K. Carlsen
Agricultural Commissioner
Table of Contents

Cover Story: Livestock Protection Program 4
Summary of Production 5
Agricultural Production Gross Value – A Ten Year Summary 6
Livestock and Aquaculture 7
Livestock Products 7
Inventories of Livestock and Poultry 8
Field, Fruit and Vegetable Crops 9
Nursery Products 10
Department Program Overview 11
Summary of Sustainable Agriculture 13
  Organic Food Production, Registration, and Certification
  Marin Organic Certified Agriculture (MOCA)
  Biological Control
  Livestock Protection Program
Pest Prevention Programs 14
  Marin/Sonoma Weed Management Area
  Pest Exclusion
  Pest Detection
  Glassy-Winged Sharpshooter
  Sudden Oak Death (SOD)
  Light Brown Apple Moth (LBAM)
Farmers Markets of Marin County 18
Department Staff 19

***

Cover photo: Bill Jensen’s Livestock-guarding Dogs
Photo credits: Anita Sauber

This report is available at our web site:
www.co.marin.ca.us/depts/ag/main/index.cfm
Livestock Protection Program

The constant pressure of predator activity on livestock is a reality that continues to challenge Marin County ranchers and July 1, 2009 marks the end of the eighth year of Marin County’s Livestock Protection Program. This program was initiated to help ranchers manage the impacts of predators, especially coyotes, and it represents an innovative effort to support and collaborate with ranchers farming within a natural system.

The livestock protection program was enacted to replace a cooperative agreement between California Department of Food and Agriculture and the U.S. Department of Agriculture, Wildlife Services, which ceased operation in Marin County in December 1999. In response, Marin County Board of Supervisors approved a five year action plan in October of 2000 to develop, implement and continuously evaluate a livestock protection program relying exclusively on non-lethal methods. After the initial five years proved to be successful, the program has continued to support and encourage innovation by livestock producers.

Since the inception of this program, participation has grown steadily. Of the thirty three sheep ranchers operating in Marin County twenty three participate in the Livestock Protection Program, including two goat operations, and a free-range poultry operation. The ranchers participating in the program constitute almost ninety percent of the sheep production in Marin County.

Non-lethal depredation reduction methods qualifying ranchers for cost share funds are predator exclusion through maintaining and improving fences; scare tactics such as noisemakers and strobe lights; husbandry and shepherding of herds, and guard animals such as dogs and llamas. Electric fences and existing fence improvement integrated with guard animals have proved to be the most successful for depredation mitigation.

To date 155,254 Linear Feet (twenty nine and half miles) of fencing has been built or improved to exclude predators. Guard animals populations have grown from twenty dogs and six llamas in 2001, to forty five dogs and twenty nine llamas in 2008.

Guard animals must bond with the herd or flock they are intended to protect and llamas and dogs have been found to do this well. Llamas provide a relatively inexpensive, low maintenance but effective guard animal by relying on their instinctive guarding responsibility when they are with other herd animals. A more advanced method of guard animals is the use of dogs that have been bred and trained to defend livestock from predators. Such breeds as Great Pyrenees, Maremma, Anatolian Shepherd, and Komodor are currently the most popular being used by Marin County ranchers. The doubling of guard dogs in the Livestock Protection Program is indicative of their success as a method of depredation reduction.
### Summary of Production

<table>
<thead>
<tr>
<th>Category</th>
<th>2008</th>
<th>2007</th>
</tr>
</thead>
<tbody>
<tr>
<td>Livestock Products</td>
<td>$35,624,799</td>
<td>$38,956,052</td>
</tr>
<tr>
<td>Livestock &amp; Misc.</td>
<td>$13,304,779</td>
<td>$15,869,989</td>
</tr>
<tr>
<td>Field Crops</td>
<td>$7,886,586</td>
<td>$6,465,039</td>
</tr>
<tr>
<td>Fruit &amp; Vegetable Crops</td>
<td>$2,654,374</td>
<td>$2,565,989</td>
</tr>
<tr>
<td>Aquaculture</td>
<td>$2,918,780</td>
<td>$2,632,930</td>
</tr>
<tr>
<td>Nursery Crops</td>
<td>$921,975</td>
<td>$642,842</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>$63,311,293</strong></td>
<td><strong>$67,132,841</strong></td>
</tr>
</tbody>
</table>

#### 2008 Production Summary

- **Livestock Products**: 21%
- **Livestock and Miscellaneous**: 5%
- **Field Crops**: 15%
- **Fruit & Vegetable Crops**: 4%
- **Aquaculture**: 5%
- **Nursery Crops**: 1%
Agricultural Production Gross Value
A Ten Year Summary

$ IN MILLIONS

$0.00
$10.00
$20.00
$30.00
$40.00
$50.00
$60.00
$70.00

## Livestock and Aquaculture

<table>
<thead>
<tr>
<th>Item</th>
<th>Year</th>
<th>No. of Head</th>
<th>Live Weight</th>
<th>Unit</th>
<th>$/Unit</th>
<th>Dollar Value Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cattle &amp; Calves</td>
<td>2008</td>
<td>14,592</td>
<td>85,315</td>
<td>cwt</td>
<td>$ 82.79</td>
<td>$ 7,063,047</td>
</tr>
<tr>
<td></td>
<td>2007</td>
<td>15,656</td>
<td>92,261</td>
<td>cwt</td>
<td>$ 84.86</td>
<td>$ 7,829,268</td>
</tr>
<tr>
<td>Sheep &amp; Lambs</td>
<td>2008</td>
<td>14,266</td>
<td>15,406</td>
<td>cwt</td>
<td>$ 75.79</td>
<td>$ 1,167,610</td>
</tr>
<tr>
<td></td>
<td>2007</td>
<td>14,087</td>
<td>15,032</td>
<td>cwt</td>
<td>$ 76.40</td>
<td>$ 1,148,461</td>
</tr>
<tr>
<td>Miscellaneous†</td>
<td>2008</td>
<td>1,606</td>
<td></td>
<td></td>
<td></td>
<td>$ 83,850</td>
</tr>
<tr>
<td></td>
<td>2007</td>
<td>3,439</td>
<td></td>
<td></td>
<td></td>
<td>$ 132,379</td>
</tr>
<tr>
<td>Poultry*</td>
<td>2008</td>
<td>250,078</td>
<td></td>
<td></td>
<td></td>
<td>$ 4,990,272</td>
</tr>
<tr>
<td></td>
<td>2007</td>
<td>230,723</td>
<td></td>
<td></td>
<td></td>
<td>$ 6,759,881</td>
</tr>
<tr>
<td>Aquaculture</td>
<td>2008</td>
<td></td>
<td>Oysters, Mussels, &amp; Clams</td>
<td>$ 2,918,780</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>2007</td>
<td></td>
<td>Oysters, Mussels, &amp; Clams</td>
<td>$ 2,632,930</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>2008</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>$ 16,223,559</td>
</tr>
<tr>
<td></td>
<td>2007</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>$ 18,502,919</td>
</tr>
</tbody>
</table>

† Miscellaneous figures include goats, hogs, and rabbits.

* Poultry 2007 figures include poultry fryers, chicken eggs for consumption, ballute, ducks, turkeys, and quail. Poultry 2008 figures include poultry fryers, chicken eggs for consumption, ballute, pheasant, and quail.

## Livestock Products

<table>
<thead>
<tr>
<th>Item</th>
<th>Year</th>
<th>Production</th>
<th>Unit</th>
<th>$/Unit</th>
<th>Dollar Value Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Milk</td>
<td>2008</td>
<td>2,019,201</td>
<td>cwt</td>
<td>$17.62</td>
<td>$ 35,578,322</td>
</tr>
<tr>
<td>(Market)</td>
<td>2007</td>
<td>2,063,773</td>
<td>cwt</td>
<td>$18.86</td>
<td>$ 38,922,759</td>
</tr>
<tr>
<td>Milk</td>
<td>2008</td>
<td>461</td>
<td>cwt</td>
<td>$17.35</td>
<td>$ 7,998</td>
</tr>
<tr>
<td>(Manufacturing)</td>
<td>2007</td>
<td>727</td>
<td>cwt</td>
<td>$16.51</td>
<td>$ 12,203</td>
</tr>
<tr>
<td>Wool</td>
<td>2008</td>
<td>80,165</td>
<td>lbs</td>
<td>$ 0.48</td>
<td>$ 38,479</td>
</tr>
<tr>
<td></td>
<td>2007</td>
<td>76,813</td>
<td>lbs</td>
<td>$ 0.27</td>
<td>$ 21,090</td>
</tr>
<tr>
<td>Total</td>
<td>2008</td>
<td></td>
<td></td>
<td></td>
<td>$ 35,624,799</td>
</tr>
<tr>
<td></td>
<td>2007</td>
<td></td>
<td></td>
<td></td>
<td>$ 38,956,052</td>
</tr>
</tbody>
</table>
# Inventories of Livestock and Poultry

<table>
<thead>
<tr>
<th>ITEM</th>
<th>HEAD</th>
<th>NUMBER</th>
</tr>
</thead>
<tbody>
<tr>
<td>All Cattle†</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Milk cows and heifers</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 years and over</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Beef cows and heifers</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 years and over</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sheep and Lambs, all†</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Poultry</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Miscellaneous**</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>HEAD</th>
<th>NUMBER</th>
</tr>
</thead>
<tbody>
<tr>
<td>32,000*</td>
<td></td>
</tr>
<tr>
<td>10,000</td>
<td></td>
</tr>
<tr>
<td>8,000</td>
<td></td>
</tr>
<tr>
<td>10,021</td>
<td></td>
</tr>
<tr>
<td>250,078</td>
<td></td>
</tr>
<tr>
<td>1,606</td>
<td></td>
</tr>
</tbody>
</table>

† Number of Head as of January 1, 2009.
* Includes cows, heifers, calves, and bulls.
** Miscellaneous 2008 figures include goats, hogs, and rabbits.
## Field, Fruit and Vegetable Crops

<table>
<thead>
<tr>
<th>Item</th>
<th>Year</th>
<th>Harvested Acreage</th>
<th>Ton/Acre</th>
<th>Total Tons</th>
<th>Unit</th>
<th>Dollar Value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Hay, Grass</strong></td>
<td>2008</td>
<td>1,125</td>
<td>2.16</td>
<td>2,430</td>
<td>ton</td>
<td>141.93</td>
</tr>
<tr>
<td></td>
<td>2007</td>
<td>910</td>
<td>2.78</td>
<td>2,530</td>
<td>ton</td>
<td>108.70</td>
</tr>
<tr>
<td><strong>Hay, Oat</strong></td>
<td>2008</td>
<td>380</td>
<td>2.2</td>
<td>836</td>
<td>ton</td>
<td>173.92</td>
</tr>
<tr>
<td></td>
<td>2007†</td>
<td>273</td>
<td>2.1</td>
<td>573</td>
<td>ton</td>
<td>110.30</td>
</tr>
<tr>
<td><strong>Silage</strong></td>
<td>2008</td>
<td>2,202</td>
<td>10.3</td>
<td>22,681</td>
<td>ton</td>
<td>32.74</td>
</tr>
<tr>
<td></td>
<td>2007</td>
<td>1,642</td>
<td>13.0</td>
<td>21,346</td>
<td>ton</td>
<td>38.60</td>
</tr>
<tr>
<td><strong>Pasture, Irrigated</strong></td>
<td>2008</td>
<td>810</td>
<td></td>
<td></td>
<td></td>
<td>100.00</td>
</tr>
<tr>
<td></td>
<td>2007</td>
<td>810</td>
<td></td>
<td></td>
<td></td>
<td>100.00</td>
</tr>
<tr>
<td><strong>Pasture, Other</strong></td>
<td>2008</td>
<td>154,000</td>
<td></td>
<td></td>
<td></td>
<td>42.68</td>
</tr>
<tr>
<td></td>
<td>2007</td>
<td>154,000</td>
<td></td>
<td></td>
<td></td>
<td>33.90</td>
</tr>
<tr>
<td><strong>Fruits &amp; Vegetables</strong></td>
<td>2008</td>
<td>281</td>
<td></td>
<td></td>
<td></td>
<td>1,950,480</td>
</tr>
<tr>
<td></td>
<td>2007</td>
<td>275</td>
<td></td>
<td></td>
<td></td>
<td>1,810,337</td>
</tr>
<tr>
<td><strong>Grapes, Wine</strong></td>
<td>2008</td>
<td>195</td>
<td>198.5</td>
<td>173.2</td>
<td>ton</td>
<td>703,894</td>
</tr>
<tr>
<td></td>
<td>2007</td>
<td>192</td>
<td></td>
<td></td>
<td></td>
<td>755,652</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>2008</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>10,540,960</td>
</tr>
<tr>
<td></td>
<td>2007</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>9,031,028</td>
</tr>
</tbody>
</table>

† Acreage and Total Dollar Value Total include values for Oat Seed grown for the production of Oat Hay.

* Varieties: Cabernet Sauvignon, Chardonnay, Gewürztraminer, Merlot, Pinot Noir, Shiraz, and Riesling. Acreage values include 47 acres of Non-fruit bearing plantings.
## Nursery Products

<table>
<thead>
<tr>
<th>Item</th>
<th>Year</th>
<th>Production Acres</th>
<th>Dollar Value Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nursery Stock, All</td>
<td>2008</td>
<td>6.68</td>
<td>$ 921,975</td>
</tr>
<tr>
<td></td>
<td>2007</td>
<td>42.00</td>
<td>$ 642,842</td>
</tr>
</tbody>
</table>
**Departmental Mission Statement**

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

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 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, 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 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 IPM Ordinance was to reduce countywide total yearly pesticide use by 75% by weight, as compared to the total pesticide use in 1997. Once again, the county has exceeded that goal with current estimates showing a greater than 80% pesticide use reduction. Currently, the County IPM Ordinance is being reviewed and updated so it reflects the county's current ongoing IPM program. Also, policy is being developed to provide clearer direction to departments for the implementation of the IPM ordinance.
**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 marketplace 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.

**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 12024 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 420 different locations that use the estimated 1,502 scanner/point-of-sale devices in Marin County. Previously these inspections were only done as a result of a complaint.
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 56 registered organic producers in Marin County, farming 20,598 acres which includes 20,197 acres in pasture, producing a total gross value of $17,443,946.

Organic crop production in Marin County include pasture, silage, milk, dairy products, hay, oats, fruits, vegetables, cut flowers, eggs, herbs, livestock, vegetable starts, olive trees, and nursery stock.

**Marin Organic Certified Agriculture (MOCA)**

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

Locally and world wide 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 operations practices of sustainable agriculture. One of the most important benefits of the MOCA program is a local service that promotes productions of organic value added products by Marin’s family farms. In 2008 the number of MOCA certified operations in Marin and Sonoma Counties increased to 49 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 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.

<table>
<thead>
<tr>
<th>Pest</th>
<th>Biological Agent/ Mechanism</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gorse</td>
<td>Gorse Mite, Seed Weevil</td>
</tr>
<tr>
<td>Bull Thistle</td>
<td>Bull Thistle Gall Fly</td>
</tr>
<tr>
<td>Yellow Star Thistle</td>
<td>Seed Head Weevil, Gall Fly, Hairy Weevil, Peacock Fly,</td>
</tr>
<tr>
<td></td>
<td>Rust – Puccinia jaceae var. solstitialis</td>
</tr>
<tr>
<td>Scotch Broom</td>
<td>Seed Weevil, Stem Boring Moth</td>
</tr>
<tr>
<td>Ash White Fly</td>
<td>Parasitic Wasp</td>
</tr>
<tr>
<td>Italian Thistle</td>
<td>Seed Weevil</td>
</tr>
<tr>
<td>Purple Star Thistle</td>
<td>Seed Weevil</td>
</tr>
<tr>
<td>Klamath Weed</td>
<td>Beetle</td>
</tr>
<tr>
<td>Eucalyptus Red Gum Lerp Psyllid</td>
<td>Parasitic Wasp</td>
</tr>
</tbody>
</table>
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, 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 livestock losses for ranchers participating in this program.

Pest Prevention Programs

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, our 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.

In 2008, the MSWMA received over $33,000 from the California Department of Food and Agriculture for the development of a Rapid Response Program for 2009. The program is designed to address early infestations of invasive weeds before they spread to larger areas and require costly control methods, or become completely uncontrollable. Under this funding, Noelle Johnson of the Gold Ridge Resource Conservation District, a partner organization, has assumed the role of Rapid Response Coordinator, and is working to collect information on early infestations throughout Marin and Sonoma counties.

A website is being 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 www.marinsonomaweedmanagement.org or contact the Rapid Response Program at Noelle@goldridgercd.org for more information. Information about the larger Bay Area Early Detection Network can be found at: http://baedn.org/

Some priority weed occurrences occur 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.

Pest Exclusion
In 2008, Marin County personnel conducted 7,437 incoming plant quarantine inspections. Plant shipments were monitored at Federal Express, UPS, DHL, nurseries, ethnic markets, aquatic supply stores, and post entry quarantine. 47 gypsy moth inspections of household goods from infested states were conducted, as well as 1,345 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 39 pests were intercepted. Of those, 7 were “Q” rated, 30 were “C” rated, and 2 were “D” rated. In addition, as of 1,240 Light Brown Apple Moths, “A” rated, were detected.
The following is a list of the significant pest interceptions:

<table>
<thead>
<tr>
<th>Scientific Name</th>
<th>Common Name</th>
<th>Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chelisoches morio</td>
<td>Black Earwig</td>
<td>C</td>
</tr>
<tr>
<td>Fungal Spore Mass</td>
<td>Fungus</td>
<td>Q</td>
</tr>
<tr>
<td>Philomycidae sp.</td>
<td>A Slug</td>
<td>Q</td>
</tr>
<tr>
<td>Kallitaxila granulata</td>
<td>Planthopper</td>
<td>Q</td>
</tr>
<tr>
<td>Linepethema humile</td>
<td>Argentine Ant</td>
<td>C</td>
</tr>
<tr>
<td>Naupactus sp.</td>
<td>A Beetle</td>
<td>C</td>
</tr>
<tr>
<td>Noctua pronuba</td>
<td>Large Yellow Underwing Moth</td>
<td>Q</td>
</tr>
<tr>
<td>Pheidole sp.</td>
<td>An Ant</td>
<td>Q</td>
</tr>
<tr>
<td>Technomyrex albipes</td>
<td>An Ant</td>
<td>Q</td>
</tr>
</tbody>
</table>

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**

2,829 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, Vine Mealy Bug, Asian Longhorn Beetle, Glassy-Winged Sharpshooter, and Light Brown Apple Moth (LBAM)). Of the 2,829 traps, 269 traps were placed for the Glassy-Winged sharpshooter in nurseries and vineyards, 251 Mediterranean Fruit Fly traps were placed in fruit trees, 231 Gypsy Moth traps were placed on hardwood trees, and 1,758 LBAM traps were placed throughout the county.

**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 2008 a total of 1,155 shipments were inspected for GWSS. Detection traps placed throughout the county are also monitored.
**Sudden Oak Death**

Marin County continues to be infested with Sudden Oak Death, 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, as well as 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® continues to be the only registered product for control of SOD on oaks. It works best as a preventative, 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).
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 fourteen counties including Marin, Solano, Napa, Sonoma, Monterey, Santa Cruz, Santa Clara, San Mateo, Contra Costa, San Francisco, Alameda, Santa Barbara, Ventura, and Yolo. A native of Australia, LBAM has also established itself in New Zealand, New Caledonia, the British Isles, and Hawaii.

If left to spread unchecked, the LBAM could adversely impact a large number of plants including native tree species, horticultural crops and over 250 fruit and vegetable crops. Potentially impacted crops include—but are not limited to—grapes, citrus, peaches, plums, cherries, apricots, pears, apples, avocados, kiwis, strawberries, nursery industry plants, and trees such as pine, cypress, and oak. Almost every ornamental plant in the average garden or yard is in danger of being harmed by LBAM.

A mature LBAM female can deposit 300 – 1,500 eggs before dying. Each generation lives approximately 6 – 7 weeks. The eggs of LBAM, laid on the upper leaf surface, are white to pale green, flat and oval, and are laid in mass with each egg slightly overlapping other eggs that resemble fish scales. The larvae may be found inside furled leaves. LBAM constructs leaf rolls (nests) by webbing leaves together, a bud and one or more leaves, leaves to a fruit, or by folding and webbing individual mature leaves. Fully grown, the 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. Many leaf roller moths are gray, tan, or brown in color, as is LBAM. 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 of the front wings (hard to see—probably need magnification to spot).

These moths are not native to the United States and therefore have no known predators or parasites here to reduce populations naturally.

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

At time of printing this report, over 4,536 male Light Brown Apple Moths had been captured in traps placed throughout Marin County. More information may be found at: [www.cdfa.ca.gov/lbam](http://www.cdfa.ca.gov/lbam)
Farmers Markets of Marin County

The purpose of farmers markets is to allow local producers to sell their certified commodities direct to the public. There are 28 certified producers that have been issued certificates in Marin County. The following 12 Farmers Markets have been certified by the Agricultural Commissioner to market local produce in Marin County.

**Civic Center Farmers Markets**
Civic Center, San Rafael
Thursdays – 8:00 am – 1:00 pm
Sundays – 8:00 am – 1:00 pm
Open All Year

**Tam Valley Farmers Market**
Tamalpais Community Center
Tennessee Valley Rd. @ Marin Ave.
Tuesdays – 3:00 pm – 7:00 pm
April – September

**Old Town Novato Farmers Market**
Downtown, Novato
Tuesdays – 4:00 pm – 8:00 pm
May – September

**Corte Madera Farmers Market**
Corte Madera Town Center
1554 Redwood HWY
Wednesdays – 12:00 pm - 5:00 pm
Open All Year

**Fairfax Farmers Market**
Bolinas Park, Downtown Fairfax
Wednesdays – 4:00 pm – 8:00 pm
May – September

**Ross Farmers Market**
Post Office
Thursday – 3:00 pm – 7:00 pm
May – October

**Downtown San Rafael Farmers Mkt.**
Fourth St., San Rafael
Thursdays – 6:00 pm – 9:00 pm
April – September

**Mill Valley Farmers Market**
East Blithedale Ave. @ Lomita Dr.
Fridays – 9:00 am – 2:00 pm
May – October

**Sausalito Farmers Market**
Bridgeway @ Bay Street
Fridays – 4:00 pm – 8:00 pm
May – October

**Pt. Reyes Farmers Market**
Toby’s Feed Barn
11250 Hwy 1, Pt. Reyes Station
Saturdays – 9:00 am – 1:00 pm
June - November

**Larkspur Farmers Market**
Larkspur Landing Circle
Saturdays – 10:00 am - 2:00 pm
May - October
Current Department Staff

Agricultural Commissioner
Director of Weights and Measures

Stacy K. Carlsen

Deputy Agricultural Commissioner
Deputy Director of Weights and Measures

Fred W. Crowder

Supervising Agricultural/Weights and Measures Inspector

Laurel Thomassin

Agricultural/Weights and Measures Inspectors

Hugo Abaurre
Johanna Good
Albert Powell
Anita Sauber
Jeffrey Stiles
Susan Ventura
Scott Wise

Senior Agricultural Program Assistant

Eric Richardson

Senior Secretary

Joanne Van Cleave

Sr. Clerk/Typist

Diana Gano-Rosete