

Contra Costa County Agriculture and Weights & Measures Newsletter



Spring 2013

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This is a part of a series of quarterly newsletters designed to inform growers in Contra Costa County about issues important to the Agricultural community. We welcome your questions and comments about any topics in this newsletter as well as suggestions for future newsletters. Contact us at:

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Vine Mealybug is Here

In February 2013, vine mealybug (VMB) was found for the first time in Contra Costa County. After nearly ten years of pheromone trapping, sampling, and surveying, staff from the Department of Agriculture trapped male vine mealybugs in a vineyard near Brentwood. An additional visual survey also found female VMB in the same vineyard.

Currently, there are at least seventeen California counties that have reported infestations of VMB. There are no state or federal quarantine restrictions for the movement of VMB host commodities at this time. However, it is a serious economic threat to our local grape industry.

VMB is a small insect that feeds on all parts of grape vines. It is a vector for grapevine leafroll viruses and produces large amounts of honeydew that damage fruit and promote the growth of sooty mold. VMB reproduces rapidly, leading

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Vine mealybug adult females and crawlers.



Male VMB are much smaller than the females and can be very hard to see.

to severe infestations that can decrease plant vigor, defoliate vines, kill spurs, and cause complete crop loss.

Treatment of infestations can be very difficult. VMB life stages occur on all parts of the vine including under the bark, in trunk crevices, and occasionally on roots in light soils. As a result, many individuals will be protected from chemical applications and natural enemies.

VMB occurs throughout the Mediterranean, Middle East, and parts of Asia, Africa, and South America. It was first reported in Southern California in 1994. Since that time, it has spread to most of the grape growing regions in California.

VMB adults and crawlers are small and hard to see. Adult females are about 1/8 inch long, oval, flat, and covered with a white mealy wax. They have a short, waxy fringe of filaments protruding from their bodies and lack long tail filaments. Adult males are much smaller than the females and are winged.

During winter, VMB will mostly be found under bark, on pruning wounds, and below the base of spurs. As temperatures warm in the spring, the populations increase and move toward the leaves and buds. As with many other mealybugs, ants may move VMB around and protect them during the growing season.

There are several species of mealybugs that may infest grapevines in Contra Costa County. Before beginning a management program, it is important to be able to tell which species is present. Although mealybugs are small, there are some characteristics that can be used to help tell the difference between VMB and other species.



One identifying characteristic is the presence or absence of long tail filaments on the females. This can be seen with the naked eye or by using a hand lens for magnification. VMB doesn't have long tail filaments as seen in the three species **above (left to right: grape mealybug, longtailed mealybug, obscure mealybug)**.

Some types of mealybugs have either no tail filaments or very short ones as shown **below (left to right: VMB, citrus mealybug, pink hibiscus mealybug)**. Using a hand lens, you may be able to narrow down the identification further. Look for a waxy fringe of filaments around the mealybug's body. VMB and citrus mealybug have the fringe, pink hibiscus mealybug does not. Distinguishing the difference between VMB and citrus mealybug requires expert identification.

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Monitoring for VMB can be done by visual surveys and/or with pheromone traps.

It is an important part of grape management to monitor mealybug populations, including VMB, using traps and/or visual survey. Our Department will place and monitor VMB pheromone traps in vineyards throughout the County and will inform growers of any finds.

VMB males are smaller than adult thrips and can't be positively identified using a hand lens. Since they are so small and can't fly very far, pheromone traps will only attract them from up to 300 feet. Growers who wish to place their own traps to monitor for VMB should have the traps checked by their PCA, Farm Advisor, or the County Department of Agriculture.

During visual surveys, look for clusters of mealybugs, black sooty mold or honeydew, intense ant activity, and white waxy substances under bark, especially near the graft union. If you find suspect mealybugs, collect the largest ones and put them into a jar of alcohol or a sealed plastic bag. Take the sample to your PCA, UC Farm Advisor, or the County Department of Agriculture office for identification.

VMB is primarily introduced into new areas on infested nursery stock, contaminated equipment (sprayers, harvesting boxes, pruning tools, etc.), grape greenwaste, vehicles, and clothing. It is important to thoroughly clean any equipment that has been in an infested area and use only clean cuttings and nursery stock. VMB can survive crushing so winery waste may also be a source of infestation.

If VMB becomes established in Contra Costa County, it could be a serious threat to our local grape industry. The grower in Brentwood where the infestation was found will treat the vineyard in the hope of eradicating it. We urge all grape growers to monitor their vineyards for VMB. If it is found, prompt and aggressive treatment will help minimize damage to the vineyards and help reduce the spread of VMB in Contra Costa County. Before starting any chemical treatment program, growers may wish to consult the winery or other recipients of their grapes for their approval.

If VMB is found in a vineyard, chemical applications are recommended in order to manage the infestation. The University of California IPM website includes pest management guidelines at: www.ipm.ucdavis.edu/PMG/.

Biocontrol organisms may help control VMB infestations although they will not be able to reach VMB located under bark. Mealybug predators include lacewings, lady beetles such as mealybug destroyer, and other general predators. Some parasitic wasps, such as *Anagyrus pseudococci*, are known to feed on VMB.

The University of California has good information on their website about how to identify and manage Vine Mealybug. We will have a link to this document and other useful information about VMB on our website (go to: www.co.contra-costa.ca.us/ and click on Departments, then Agriculture/Weights & Measures).



Mealybug destroyers are beetles that feed on mealybugs. The larvae (above right) look like mealybugs but are larger and more active.

New Pesticide Label Format Changes

This year, pesticide users in the United States may start to see changes in the format of both pesticide labels and safety data sheets. The changes result from the US adoption of an international standard called the Globally Harmonized System of Classification and Labeling of Chemicals (GHS). GHS is a chemical labeling system that gives users clear, consistent, and easy to understand information about health and physical hazards.

GHS was first created by the United Nations in 1992 as a worldwide standard for chemical labeling. Before GHS, each country had its own, often conflicting, standards and regulations. Given the international trade in chemicals, users might have to read and interpret a wide variety of chemical label formats from many different countries. The GHS standardized system makes it easier for workers to find and understand important hazard information on labels and safety data sheets. This helps reduce the risk of injuries and illnesses due to chemical exposure. Globally used label standards also make world trade in chemicals easier.

Although GHS is not compulsory under UN law, over 60 countries have either already adopted it or are in the process of doing so. These include the European Union, Canada, Mexico, Japan, China, Russia, Australia, most of South America, and many others. The United States adopted GHS in May 2012. By the end of 2015, all chemicals sold in the US must use the new format. As manufacturers make the changes, growers will see more and more of the new format pesticide labels and safety data sheets.

The new labels will look a lot like the old ones. The most obvious change will be the addition of a pictogram symbol to allow quick hazard identification. The pictograms look very similar to those required by the US Department of Transportation (DOT) for hazardous material transport. This is not surprising since both types of symbols are based on recommendations issued by the United Nations.



Hazard pictograms used by the new GHS labeling format. Top row left to right: moderate toxicity/irritant; high toxicity; carcinogen/reproductive toxicity. Middle row left to right: environmental toxicity; flammable; corrosive. Lower row left to right: oxidizer; compressed gas; explosive. See the OSHA website for additional hazards associated with many of the symbols.

Another format change will be the in the signal words used to indicate the chemical's hazard level. Under the old format, labels had one of three possible signal words: "Danger", "Warning", and "Caution". Under the new GHS format, there will only be two possible signal words, "Danger" for severe hazards and "Warning" for less severe hazards.

The elimination of "Caution" as a signal word will affect California pesticide users, especially employees who handle pesticides. Current California law allows exemptions from certain requirements when the pesticide has a "Caution" signal word. For example, pesticide storage areas containing only "Caution" pesticides don't have to have posting signs. When manufacturers of "Caution" pesticides relabel these same materials as "Warning", posting signs will be required.

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When the “Caution” signal word is discontinued, there are several other exemptions that will disappear. All employees who handle pesticides will have to be provided with: a change area; decontamination facilities; coveralls; shut-off devices on mixing tank equipment hoses; and medical supervision for the use of organophosphates and carbamates. Certain specific exemptions for employee personal protective equipment will also vanish with the “Caution” signal word. It is possible that when the “Caution” signal word is discontinued, some of the current “Warning” pesticides could be reclassified as “Danger”. If so, there may be other changes in their use requirements.

Most other format changes will be minor. The wording of hazard and precautionary statements will be standardized, but in most cases will contain the same information as on the old format. “Material safety data sheets” (MSDS) will be renamed “safety data sheets” (SDS) and will have a 16-section standardized format that includes information about the physical, health, and environmental health hazards of the chemical.

The first of several GHS completion deadlines will happen this year. By December 1, 2013, employers are required to train their employees on how to read and interpret the new label and SDS formats. After December 1, 2015, chemical manufacturers and distributors may no longer make or ship chemicals with the old label format. By June 1, 2016, all employers must have their workplace labeling and training updated to comply with the new requirements.

For the next two years, it will be especially important for growers to carefully read the labels of any pesticides they buy. When the new format labels and SDS become available, employers and pesticide users should update their records to include them. OSHA and EPA both have websites with useful information and training materials: (OSHA - www.osha.gov/dsg/hazcom/index.html); (EPA - www.epa.gov/oppfead1/international/globalharmon.htm). The

new label format changes are *not* retroactive. Growers and businesses that have old label format pesticides may still continue to use them.

The California Department of Pesticide Regulation hasn’t given the County Departments of Agriculture any guidance about how to enforce the new changes. However, we expect that there will be a transition period in which pesticide users will be informed of the new requirements.



Exbug Dust

Active ingredient	
Exylamine.....	0.5%
Inert ingredients.....	99.5%
Total.....	100.0%

**KEEP OUT OF REACH OF CHILDREN
CAUTION**

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

Harmful if inhaled. Avoid breathing dust. Causes moderate eye irritation. Avoid contact with skin, eyes, or clothing. Harmful if swallowed. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet. Remove and wash contaminated clothing before use.

ENVIRONMENTAL HAZARDS

Do not apply directly to water. Do not contaminate water when disposing of equipment washwaters or rinsate.

A sample pesticide label with the old format requirements (above) and the new GHS format requirements (below).



Exbug Dust

Active ingredient	
Exylamine.....	0.5%
Inert ingredients.....	99.5%
Total.....	100.0%



**KEEP OUT OF REACH OF CHILDREN
WARNING**

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

Harmful if inhaled. Avoid breathing dust. Causes eye irritation. Causes skin irritation. Avoid contact with skin, eyes, or clothing. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet. Remove and wash contaminated clothing before use.

ENVIRONMENTAL HAZARDS

Harmful to aquatic life. Do not apply directly to water. Do not contaminate water when disposing of equipment washwaters or rinsate.

Tips To Prevent Agricultural Crime

Crime in rural areas has reached epidemic levels in California. Thieves often target farms because the isolation lets them steal without being seen or heard. As a result, theft of farm equipment, chemicals, fuel, metal, crops, and livestock has become a big business. However, when farmers and ranchers make theft more trouble than it's worth, thieves will look elsewhere for easier targets. Here are some tips to help protect your property from thieves.

Never leave tools and other equipment unattended. Keep equipment locked inside a barn or shed with secure doors and windows. Keep storage areas well organized and conduct inventory regularly to detect theft. Use strong locks to secure pumps, fuel tanks, storage bins, electrical boxes, etc. Case hardened locks and chains are recommended.

Mark equipment with an engraved, owner applied number (OAN). Keep records of the OAN, the equipment type, and its serial number. If your equipment is stolen and recovered, the records can be used to help find the rightful owner. Many California counties belong to a nationwide program in which OAN's can be registered and made available to law enforcement agencies. At this time, Contra Costa County does not belong to this program.

Protect machinery from theft and vandalism by parking it away from and out of sight of public roads. If machinery will be stored outside for long periods, disable it by removing batteries, rotors, distributor caps, etc. Also, chain and lock the machinery to a stationary object and remove any easily stolen parts.

Install audible alarms, cameras, motion sensor lights, etc. on storage buildings to detect and prevent illegal entry. Make sure all fences and gates are in good condition and locked securely. Trim trees and shrubs for good visibility. Display warning signs on points of entry to the property to help discourage thieves.



Help discourage theft by: having strong locks and security systems, being alert for suspicious activity, and joining a watch program.



Agricultural chemicals are easy money for thieves. Keep all chemicals in a securely locked storage area. Have chemicals delivered shortly before use so they won't be stored for long periods of time. Buy only what you will need.

Secure bins, trailers, and other containers loaded with harvested crops. Ensure the trucking company takes your loaded containers directly to destination. When planting new trees, paint a colored band on each tree to help identify them if they are stolen. Don't leave trees to be planted stored unsecured at the site overnight.

Make a note of the description and license plate number of any suspicious vehicles or persons and send the information to local law enforcement. If possible, set up a local watch program with your neighbors. Have and understand your insurance coverage for theft. If you are the victim of theft, help the law enforcement investigation by preserving the crime scene and not contaminating the evidence.

For more information on how to mark equipment, report thefts, and other useful information, go to the California Farm Bureau rural crime prevention website at www.cfbf.com/ruralcrime/

New Electric Pricing

As part of a state program to help protect California's energy resources, flat rate electric pricing for agricultural and other business customers is being phased out and will be replaced by a variable price system. Under flat electric rates, businesses were charged the same rates for electricity no matter when it was used. With the new Time-Varying Pricing, the cost of electricity will vary based on the time of day and season in which it is used.

Agricultural customers who use more than 200 kW per month were already changed to the new rates in February 2011. Beginning in March 2013 and continuing over the next several years, agricultural customers who use less than 200 kW per month will also make the transition. PG&E will provide customers notices before they are changed to the new rates.

Time-Varying Pricing allows customers to choose between two different programs. Under the first, Time-of-Use Pricing, rates are higher when electric demand is higher (typically weekdays May through October, noon to 6 p.m.). In return, rates will be lower during partial-peak and off-peak hours of the day.

In the second program, Peak Day Pricing, PG&E designates between 9 to 15 days a year as "event days". During peak hours on event days, both the demand for electricity and the rates charged for it will be higher. Businesses that agree to reduce energy usage during event day peak hours will get credits for their electricity use.

Agricultural customers who were changed to the new rates in February 2011 were automatically placed in the Peak Day Pricing program. However, all agricultural customers may select either of the two programs.

For more information, go to the PG&E website at (www.pge.com/mybusiness/energysavingsrebates/timevaryingpricing/) or call 1-877-311-FARM (3276).

Contra Costa County Yesterdays

Dr. John Strentzel was an important grower in the Martinez area in the middle of the 19th century. Although he is now mostly known as the father-in-law of the naturalist John Muir, Dr. Strentzel was a well known local grower in his day.

Dr. Strentzel and his family came to California during the 1849 Gold Rush and then moved to Martinez in 1853. He started with 20 acres of grapes, fruit and nut trees, and ornamental plants. He began to experiment with new production methods and tested crop varieties from all over the world.



Dr. John Strentzel at his farm in Martinez in 1885.

Dr. Strentzel was already an established authority on California agriculture by the time he met his future son-in-law, John Muir. He tested over 1,000 varieties of crop and ornamental plants. He contributed articles about his research to many publications and gave college lectures on agriculture. He helped establish state and local farmers' associations and served on the first board of three horticultural commissioners for Contra Costa County (a predecessor of today's County Agricultural Commissioner).

As Dr. Strentzel's health failed, he relied on his daughter and son-in-law to run the family fruit ranch. Profits from the ranch allowed John Muir to write and work for conservation causes.



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