

MONTEREY COUNTY...

CENTRAL COAST

VINEYARD NEWS



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VINE MEALYBUG ON THE CENTRAL COAST NOTICE FROM THE MONTEREY COUNTY AGRICULTURAL COMMISSIONER

VINE MEALYBUG ON THE CENTRAL COAST

Are You Doing All You Can to Prevent This Insect Becoming Established in Your Vineyard?

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The vine mealybug, *Plannococcus ficus* (Signoret), has been found throughout most of the grape producing regions of California. On the Central Coast, infested vineyard sites in San Luis Obispo, Santa Barbara, Monterey and Santa Clara counties have been found and verified by CDFA. Most of the confirmed infestations have been found in vineyards planted since 1998. Given that this insect has been moved by nursery stock, contaminated equipment and personnel we would expect to see many new infestations to be found this season. This pest has the potential of severe crop damage and loss due to the heavy production of honeydew and the resulting growth of sooty molds. In grape producing areas where this insect has become established total crop loss is possible without the use of costly insecticide treatments. It is important that all growers and their vineyard staff become familiar with this pest and take appropriate measures to monitor their vineyards for the presence of vine mealybug and to prevent this insect from moving into non-infested vineyards or non-infested blocks

of vineyards where vine mealybug has been found. Many of the current infestations appear to be limited in area. If vineyard managers employ the best management practices to locally eradicate or suppress vine mealybug it may eliminate or reduce the chance of this insect from spreading and becoming an established pest on the Central Coast.

Educational Materials

Being able to detect this insect early before it becomes established in your vineyard will be essential. Both managers and vineyard workers need to be able to recognize this insect. The following materials are available:

- A bilingual English/Spanish vine mealybug poster is available and can be purchased from the UC Cooperative Extension offices in Salinas. It is a 11x17 inch laminated poster. The poster can also be downloaded online at:
<http://ucce.ucdavis.edu/files/filelibrary/1598/10955.pdf>

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The intent of this poster is to educate field workers about this pest so they would be able to recognize an infestation and report it to their immediate supervisor. Enabling field workers to be able to identify vine mealybug should be an essential part of the control strategy for this pest.

- UC Publication 21612, "Mealybugs in California Vineyards" can be purchased at the UC Cooperative Extension offices or online at: <http://anrcatlog.ucdavis.edu>.
- Pictures of the vine mealybug as well as their biology and control options can be viewed on the UC Pest Management website at: <http://ucipm.ucdavis.edu/PMG/r302301911.html>
- **Mealybugs in California Vineyards** is a University of California website providing information on the mealybug species found in California vineyards. It is an excellent source of information on the biology and control methods as well as pictures of the various species. It can be viewed at: <http://vinemealybug.uckac.edu/>

Pheromone Trapping

The use of a pheromone trap for the vine mealybug has been essential in helping to locate new infestations. The trap consists of a red delta sticky trap and a specific pheromone capsule that attracts the male vine mealybug (the adult male is the only stage of mealybug that can fly). A positive find in a trap only indicates the presence of the insect; a survey will be necessary to locate the insects and define the size of the infestation. The traps will help in showing areas where detailed field surveys need to be conducted. There is currently one commercial manufacturer of the pheromone capsule, Sutterra <http://www.sutterra.com>; their distributor of the traps locally is Western Farm Service. For information on availability of these traps call the WFS office in your area. The Monterey County Agricultural Commissioner's Office has a limited number of vine mealybug (VMB) traps (See article below from the Agricultural Commissioner's Office).

Trapping Protocol

- Traps should be placed in the following areas: all vineyards planted since 1998; older vineyards that have had significant replanting or interplanting programs with nursery stock; older vineyards that have had equipment or personnel from a known infested site; all vineyards adjacent to known infested sites regard-

less of age; and near crush facilities that receive fruit from known or potentially infested sites.

- The traps can effectively attract males from a distance of approximately 300 feet. An initial trapping density of one trap per 20 acres is suggested. Trapping at too low of a density may not catch males from an infestation.
- Traps should be labeled with a permanent marker with the block name, location and the date it was placed in the vineyard.
- Traps should be attached from the trellis wires to hang inside the canopy. Because pheromones move on air currents, traps should be placed to prevent attracting males from adjacent vineyards. Traps should be placed in the interior sections of a vineyard block. Avoid dusty areas as it will be difficult to read the traps if they are contaminated by dust.
- Traps should have been placed in vineyards by late March. Male flight activity has become more active as temperatures warmed this summer. Trapping should continue through harvest. **It is not to late to place traps out this season to detect infestations. The early detection is essential in order to prevent further spread of vine mealybug during harvest and to plan best management practices for the 2004 season.**
- The traps should be checked frequently, at a minimum of every two weeks. The pheromone capsules will last for up to two months before needing to be replaced. The sticky traps can be used until dust or other insects excessively cover it.
- When the sticky traps are changed or removed from the vineyard the date should be recorded on the trap and they should be placed individually in a plastic bag to avoid contamination.
- Identifying the male mealy bugs will require being able to recognize this very small insect and being able to separate it from other insects that may enter and get stuck in the trap. To the naked eye this insect will appear as a small speck in the trap. Occasionally some minor mealybug species can be found in the traps at very low numbers. The identification and separation of other male species requires examination under a microscope to compare the caudal setae (small filaments that emerge from the posterior end). The ability to recognize male mealybugs on a trap will be difficult and you may need assistance. Contact me if you need assistance in identifying male mealybugs. A color print of the male mealybugs is available at the UC Cooperative Extension offices in Salinas.

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- The male mealybug identification sheets are also available as a download at the following website: <http://ucce.ucdavis.edu/files/filelibrary/1598/7641.pdf>
- If you suspect find that you have found vine mealybugs in a trap or have found vine mealybug females in a vineyard bring them in to the UC Cooperative Extension or Agricultural Commissioners office for a positive confirmation.

It is important to remember that the traps only indicate the presence of an infestation. A thorough ground survey will be necessary to determine the size and the extent of the infestation. If you have questions contact the UC Cooperative Extension or the Agricultural Commissioner's office in your county for more information.

Management Practices

Sanitation

The female mealybug is unable to fly so it must be carried by humans, equipment, birds, or on nursery material at planting. Do not allow contaminated equipment, personnel or nursery stock to move into uninfested vineyards. Equipment from infested sites needs to be thoroughly cleaned of soil, debris and insects. Dormant nursery material should be properly hot water dipped. Green growing nursery stock needs to be certified to be free from mealybug infestation. Vineyard workers that come into contact with infested vines can also spread the insect. **Knowing where infestations might be is essential to prevent spread within the vineyard or movement to other vineyard sites.**

Chemical Controls

At this point it appears that the known infested sites are still limited to small area within blocks. An eradication

program is recommended in an attempt to prevent the vine mealybug from becoming established on the central coast. If vine mealybug is first discovered in the vineyard in late summer or fall, apply a postharvest treatment of a foliar insecticide to kill mealybugs on the leaves and wood so that the infestation is not spread to other parts of the vineyard when leaves drop or when the vines are pruned. Postharvest treatments are only recommended the first season that vine mealybug is discovered. The year following discovery, apply a delayed dormant treatment of chlorpyrifos (Lorsban®) or buprofezin (Applaud®) and then treat with imidacloprid (Admire®) at bloom. Make either a single application of imidacloprid (Admire®) or a split one, depending on soil type. During summer, treat with buprofezin (Applaud®) if insect are active. Other materials (methomyl and dimethoate) are available for treating vine mealybug during summer, but they are not as effective and are more disruptive of beneficials.

For more information on chemical controls contact the UC Cooperative Extension office. The registered materials and more information on controls are listed in the UC Pest Management Guidelines that are available at our office or can downloaded at: <http://ucipm.ucdavis.edu/PMG/r302301911.html>

Harvest Precautions

As the harvest begins harvest equipment, vehicles, and vineyard workers will be moving from different vineyards. If you do not have direct control over this movement inquire about their point of origin and whether that site has vine mealybug. Mealybug populations are generally the highest at harvest. Vine mealybug can be transported on fruit, canes and leaves. Equipment needs to be cleaned before it enters or leaves the vineyard to prevent spread.

NOTICE FROM THE MONTEREY COUNTY AGRICULTURAL COMMISSIONER

Ken Corbishley, Chief Deputy Agricultural Commissioner

The Monterey County Agricultural Commissioner's Office has a limited number of vine mealybug (VMB) traps. These traps are provided free of charge to growers that want to trap their vineyards this season. If interested please contact our King City Office at (831) 385-5266 or me at (831) 759-7325. Some requirements will be placed of those accepting these traps such as returning all traps along with maps showing where the trap was placed and conducting a visual survey when ten or more male VMB are trapped in a single trap.

Also, the department's website has been updated with VMB information. Please visit our website at <http://www.co.monterey.ca.us/ag/vbm.htm>. At the website you will find recommended procedures for the 2003 grape shipping season along with a model ordinance and survey procedures that will most likely be adopted by all premium wine grape growing counties before the 2004 season. If this ordinance is adopted by grape receiving counties, growers will be required to comply with the trapping and/or treatment protocols if they wish to move their grapes.

Next season is sure to be an interesting one, please be sure to monitor our website and pay attention to updates in this newsletter and mailings from this office.

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Central Coast Vineyard News

September, 2003

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Contact the office 72 hours in advance for special accommodations.



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