



University of California Cooperative Extension

Grape Notes

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Division of Agriculture & Natural Resources

County of San Luis Obispo

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Vine Mealybug Update

Since the previous Grape Notes newsletter last fall, there have been numerous new finds of the vine mealybug throughout California. Counties where the vine mealybug has been found and verified by CDFA now include San Luis Obispo, Santa Barbara, Monterey, Napa, Sonoma, Sacramento, El Dorado, Stanislaus, Madera, Kern, Fresno, and Riverside. Given the pattern that we are seeing with the rapid spread of this pest, we can expect to find numerous new infestations in all grape growing areas of the state this upcoming season.

Identification Materials

Educational materials are available to help you and your field workers spot this pest early on, before it becomes established in your vineyard. Early identification and treatment is the key to success with this pest.

- **Bilingual Poster**

A bilingual English/Spanish vine mealybug identification poster is available for \$3.00 from Cooperative Extension offices; many of you who have attended local Extension meetings may have already purchased a copy. The poster is intended to educate field workers about this pest, so that they know to notify their supervisor if they see the vine mealybug in the field. Enabling field workers to be on the lookout for this pest should be a key part of your control strategy; they are in the best position to find infestations when it is still localized. A small investment in educating your field workers could mean a huge savings in chemical control measures later on.

Pheromone Trapping

Pheromone trapping is one of the best methods currently available for locating new infestations. The pheromone traps consist of a standard sticky trap along with a special pheromone capsule that attracts the male vine mealybug (the male does not damage the vines; it is the female that causes the damage). Positive finds on a trap will not pinpoint exactly where an infestation is, but will help define an area where detailed field surveys need to be done.

Considerations for Pheromone Trapping

- **Trap Locations**

The top priorities for trap placement should be every vineyard that has been planted since 1998, in particular with planting material from the San Joaquin Valley, and older vineyards that have movement of equipment or personnel from known infested areas of the state.

Vineyards near known infested sites, regardless of age, should also be top priorities for trapping. Additionally, crush facilities that receive shipments of fruit from known or potentially infested regions should have traps nearby as well.

- Wind effects

Unlike some other types of pheromone traps, the vine mealybug trap should be placed **downwind** from the vineyard if a wind gradient exists. The pheromone is not potent enough to lure males away from the females; rather, the traps tend to catch the males that have strayed away from an infestation. The male is very small and a weak flyer, and can easily be blown downwind from an infested area.

- Trap Density

The pheromone traps can capture stray males over a considerable distance. Trapping densities of approximately one trap per 15-25 acres should be sufficient for this initial effort. Trapping at a lower density may not catch males from an infestation; take into consideration your own vineyard layout to make the most efficient use of the traps.

- Dusts in traps

The vine mealybug male is very small. If a trap is placed in a dusty location, such as along a heavily traveled dirt road, this will make the trap much more difficult and time-consuming to evaluate. Avoid placing traps in dusty areas.

- Timing

With the warmer weather towards the end of winter and early spring, the males will start emerging and trapping will become effective. Trapping is probably not worthwhile until this time. In the warmer regions of the Central Coast, it would be ideal to have traps in place by mid to late March. Trapping can continue up through harvest.

- Checking traps

The traps should be checked frequently, every two weeks if possible. The pheromone capsules can be effective for up to two months before needing to be replaced with a fresh capsule. The same sticky trap can be used in a single location until it becomes excessively covered with other insects or dust.

- Identifying males

The most difficult part about using the pheromone traps is that the male is very, very small and difficult to identify without the proper equipment and identification information. To the naked eye, the males look a lot like small black pepper sprinkled onto the traps. You cannot evaluate traps effectively with a typical 10x hand loupe; you will need to have a 30x or greater microscope to positively identify the males. Positive identification is by a pair of filaments that emerge from the posterior end of the insect. Males of other minor mealybug species may end up on the traps, and other insects will stumble into the trap as well. For anyone involved with checking traps, it is imperative that they know what to look for. An identification sheet with detail photographs of the male vine mealybug on traps is available for free download at this website:

<http://ucce.ucdavis.edu/counties/cesanluisobispo/Viticulture/2792.pdf>

A laminated color print of this document is available for purchase at nominal cost at the UC Cooperative Extension offices in San Luis Obispo and Santa Maria. See the seminar announcement on the following page for additional information.

- **Local UCCE trapping effort**
The San Luis Obispo Cooperative Extension office will be conducting limited trapping in both Santa Barbara and San Luis Obispo Counties, primarily targeting vineyards surrounding the known infestations.
- **Commercial trap sources**
Currently there is one commercial manufacturer of the vine mealybug pheromone traps, Sutterra in Oregon (www.sutterra.com); as of this writing they will be distributing their traps through Western Farm Service; for information on the availability of these traps, contact WFS.
- **Coordinated local trapping effort**
Dr. Kent Daane, UC Biocontrol Specialist, has solicited funding to help support a coordinated vine mealybug trapping effort throughout the state. If funding is approved, this effort will target the vineyards with the greatest likelihood of being infested. There is no guarantee that this request will be funded; be prepared to arrange your own trapping program.

Additional Information

For current information on the vine mealybug, the UC Integrated Pest Management website is available:

<http://www.ipm.ucdavis.edu/PMG/r302301911.html>

An electronic version of this newsletter is also available at:

http://ucce.ucdavis.edu/counties/cesanluisobispo/newsletterfiles/Grape_Notes2578.pdf

Other news:

The University of California has updated the UC IPM Pest Management Guidelines for grapes. The PDF files are available for free at:

<http://www.ipm.ucdavis.edu/PDF/PMG/index.html>

Pheromone Trapping for Vine Mealybug

Pheromone trapping is the currently the best method available to help find unknown vine mealybug infestations. This hands-on seminar will teach you how to identify the vine mealybug males on sticky traps, and review basic pheromone trapping protocols. PCA's, consultants, and other personnel who will actually be working with these traps should attend this free seminar.

Solvang **Thursday, March 13, 2003** **10:30 am – 11:30 am**
Allan Hancock College, Solvang Center
Solvang Village Square
320 Alisal Road, Suite 306

Santa Maria **Friday, March 14, 2003** **10:30 am – 11:30 am**
Allan Hancock College
Conference Room in the new Student Center, Building G
Off of Bradley Road

Paso Robles **Monday, March 17, 2003** **10:30 am – 11:30 am**
Centennial Park
Live Oak Room
600 Nickerson Drive

San Luis Obispo **Tuesday, March 18, 2003** **12:30 pm – 1:30 pm**
Cooperative Extension Auditorium
2156 Sierra Way (Agricultural Commissioner Building, near corner of Johnson & Bishop)
Auditorium is on the lower level

For further information, call Mark Battany at 781-5948 or email mcbattany@ucdavis.edu

Complete directions can be sent by fax or email; please ask if you are not sure of the locations.

Thanks to Allan Hancock College and the CCWGA for their assistance with arranging the meeting facilities.

