

Vine Mealybug Winery Best Management Practices

Vine Mealybug (*Planococcus ficus*) Best Management Practices (BMPs) for *wineries* are common sense practices that will reduce the risks of inadvertent spread of vine mealybug (VMB) to other blocks and vineyards. The effectiveness of some of these practices has not been validated with research data; however they balance cost with practical considerations for winery and vineyard operations.

Field Sampling – All Vineyards

All winery personnel that enter vineyards should have received training on how to identify signs of a VMB infestation. Because infestations often go unnoticed for one or more years, the following **Minimum Sanitation Measures** should be taken prior to leaving one vineyard and entering another:

- Wash hands with soap and water
- Wipe clean or wash all sampling equipment that was taken into the vineyard
- Hat, shirt, pants and shoes should be vigorously brushed off to remove fruit or leaf debris.

Field Sampling – Infested Vineyards

If a vineyard is infested with VMB, then stringent sanitation steps are required.

- 1) An infested vineyard should be the last one visited in a day if possible.
- 2) If the infestation is believed to be limited to one block or area within the vineyard, enter that block/area last and visit uninfested blocks/areas first. When moving between uninfested blocks/areas, take Minimum Sanitation Measures (see above) between each block.
- 3) **Active Sanitation Measures** should be taken while inside an infested block/area.
 - a) Disposable coveralls or sleeve covers should be worn. When the task is completed, dispose of these by placing inside a bag that is then added to a garbage container that will be sent to a landfill.
 - b) If protective clothing is not worn, then the winery employee should wash hands and arms with soap and water prior to leaving the vineyard.
 - c) If washing on site is not possible, then wash off-site before entering another vineyard.
 - d) Hat, shirt, pants and shoes should be vigorously brushed off to remove fruit or leaf debris.

Winery Sanitation Practices

Wineries may want to consider taking sanitation measures for *all loads* received and not just those known to be from infested vineyards. It is very possible that loads will be received from vineyards that contain infested vines of which the grower is not aware. The winery should communicate its VMB harvest and winery waste management protocols to employees and to growers prior to harvest.

Growers should be reminded that prior to delivery, all leaves should be removed from the tops of grape bins and the outside surfaces of trucks, trailers and bins should be free from all plant debris.

Grape Loads from an Infested Vineyard

Additional efforts must be taken to prevent infested grapes and contaminated winery waste from spreading VMB onto vineyards adjacent to the winery. .

- 1) A grower that is delivering grapes from a VMB infested vineyard should be scheduled to limit time in line.
- 2) Wineries should require growers to tarp all infested loads.
- 3) Immediately after the grape bins are dumped, they should be pressure washed with hot water on site.
- 4) The winery should transport waste (stems and pomace) from the crush pad to an area where it can be covered with clear plastic for at least a week, or transport it to a composting facility or landfill. The waste should be covered during transport. The bins and truck used to transfer this waste will be contaminated with VMB, thus they should be immediately pressure washed with hot water.
- 5) If the winery cannot transport or manage waste as described above, then the grower should be asked to remove waste generated by the infested load. In that case, when the grape bins are filled with pomace and/or stems, they must be covered with a tarp before leaving the winery. The grower should then transport it back to the originating vineyard, to a landfill for disposal or to a composting facility. (If returned to the vineyard, the waste must be immediately covered in clear plastic for at least one week.)
- 6) Trucks, trailers and empty grape bins should be washed before leaving the winery.

Winery Waste Management

Research has shown that cluster stems from destemming operations and unfermented pomace from cluster pressing operations may contain live VMB. Fermented pomace that has not been combined with either stems or unfermented pomace will not contain live VMB.

- 1) No winery waste should be spread directly in vineyards because VMB may have been present on delivered grapes, but not detected prior to harvest.
- 2) Winery waste placed in piles for storage and not managed (that is, the piles are not turned and wetted as in a composting operation), should be securely covered in clear plastic for at least one week to solarize the mass and reduce VMB numbers. Covering waste piles should be done the same day they are formed.
- 3) Winery waste piles – unmanaged and managed – should be located at least 50 feet away from vines. In addition, a location should be selected so that leachate from the piles will not contaminate surface and ground waters.

The University of California Cooperative Extension, Sonoma County Viticulture Program contains several documents on VMB, <http://cesonoma.ucdavis.edu/Viticulture717/Mealybugs.htm>. The following document is related to **winery waste**:

- “Managing Vine Mealybug in Winery Waste” (*Wine Business Monthly*, December 2005)

These BMPs are common-sense guidelines that were developed based upon what we know about VMB today. They must be adapted to fit your winery operations. The goal is to limit the inadvertent spread of VMB in Sonoma County, which is in the best interest of all growers and wineries.

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