



Oregon State University
Extension Service



OREGON
DEPARTMENT OF
AGRICULTURE

Oregon Vine Mealybug Vineyard Survey - 2023

This protocol outlines the process for placing vine mealybug traps in vineyards by growers who volunteer to monitor vineyards in efforts to determine if and where vine mealybug is present in Oregon. Participation is voluntary. Information will be shared with you directly so that you can make decisions on future management. Vineyard identification will be kept anonymous and shared in aggregate for statewide reporting.

Trapping & Monitoring Protocol

1. **Make a map:** Make a map of where you place each trap in your vineyard(s). **Place three traps in different areas of the vineyard.** Place one trap towards the center of the vineyard and one at the entry point where machinery typically first enters. This is where an infestation is most likely to begin. Place traps in areas where there is risk of introduction, such as new vineyard plantings, where equipment and personnel enter, or, if near a winery, place near grape receiving areas.



2. **Trap Labeling:** Use a permanent marker to write a unique identification label on the bottom of the trap (also label your map with its location). That way, if only one trap is positive for vine mealybug, you can narrow down infested areas. The label should include the following:

Vineyard: vineyard name and block reference (e.g., north, middle, etc.)

VMB (*this stands for vine mealybug lure*)

Name of the person setting the trap:

Date placed in the field:

Date removed from the field:

BugFree Vineyard Block 53
VMB

Placed: 7-14-23

J. Jones

Removed: 8-15-23

Figure 1. Sample labeling for a delta trap.

The required information is written with a permanent marker on the bottom of the trap to avoid fading and weather damage.

3. Place lure inside the trap: Lures are rubber septa impregnated with pheromone. The septa must be placed in the stickum at the bottom of the trap. Add a new lure every four weeks. Old lures can be left in the trap if the trap will remain in the field for the rest of the season.

4. Trap placement within the vine: Ideally, traps should be placed within grapevines and not in other plants on the property. Traps should be placed at the fruiting zone/cordon height within rows (Figure 2).



Figure 2. Proper placement of a delta trap in the vine canopy, along the fruiting wire.

5. Trap Check: Traps should be checked every four weeks. Open the trap and scan for male mealybugs. If the trap appears to have many mealybugs (Figure 3) or if it is dirty, remove it and send it to the Oregon Department of Agriculture. If it appears mealybug free, you can add a new lure and leave it for another month or until the end of the season. Male mealybugs are a little over 1mm and difficult to see and identify. For tips on identification see <https://ucceviticulturenapa.wixsite.com/uccevitnapa/mealybugs>.

Do not dispose of used traps. All traps should be checked by ODA lab staff for the presence of mealybugs at the end of the season.



Figure 3. This image shows the inside of a delta trap. It has over 500 male vine mealybugs on it. The squares are about $\frac{3}{4}$ inch. The males look like tiny specks. Magnification will be required when you check traps!

Sample submission: When suspect mealybugs are present or when traps are removed at the end of the season, send the entire trap to the Oregon Department of Agriculture at the address listed below. Make sure traps are labeled and associated with your contact information. Before you ship your traps to ODA, go the ODA mealybug database <https://oda.fyi/mealybug> and enter information on the traps and where they were placed, including the unique label name on each trap.

Mail traps to:

Josh Vlach

Oregon Department of Agriculture

635 Capitol St. NE

Salem, OR 97301

****Be sure to include YOUR contact information so we can contact you with results.**

There is no need to send an email when submitting samples. However, if you have questions about this protocol, please contact us at insectid@oda.oregon.gov.

What happens if my traps catch vine mealybug?

The ODA entomology lab will evaluate each trap that is submitted in 2023. However, that work will not be completed until after the growing season. Therefore, you will not know if you have a positive identification until winter 2023-2024.

- A quarantine ~~will~~ be applied to properties which:
1. Have both grapevine plantings and 10 or more male vine mealybugs are caught in a trap
 2. Have grapevine plantings, at least one VMB in a trap, and are adjacent to a property that meets the criteria in #1 above.

The quarantine does not prohibit the sale of fruit, but it requires that actions be taken against the pest to prevent spread to other vineyards. The details of the quarantine are outlined below per Oregon administrative rules (OAR).

[Vine mealybug quarantine OAR 603—52—0051](#)

How long will my property remain under quarantine?

The quarantine can be lifted after a site has three consecutive years of negative trap results. The third year of trapping must be conducted in the absence of a mating disruption program.

What Actions are Required by the Quarantine? Oregon's quarantine against pests of grapevine ([OAR 603-052-0051](#)) requires that infested properties take action against regulated pests found on site. The rule outlines three types of actions ODA may require for dealing with infested sites within Oregon:

1. Destruction of infected plants.
2. Providing a directive specifying approved mitigation measures.
3. Requiring equipment, tools and machinery used within the infested area to be cleaned with steam under pressure.

For the purpose of mitigating quarantined properties, ODA is requiring actions #2 and #3. Please note that under section 6 of OAR 603-052-0051, the ODA may require additional actions as deemed necessary that extend beyond #1-3 above.

Action #2: ODA requires that treatments be undertaken to suppress the pest. Treatments will include two component: mating disruption and systemic pesticide treatment on grapevines. The preferred active ingredient is spirotetramat, although other active ingredients may also be acceptable. Treatment plans should be developed and applied with the oversight of a licensed pest control applicator.

For information on management, including pesticide and mating disruption programs, see the Oregon State University Extension Service's page at: <https://extension.oregonstate.edu/collection/vine-mealybug-oregon>.

Action #3: ODA requires the following phytosanitary actions to be taken:

1. **No movement of potentially infested plant material off site.** Ideally leaves, stems and other plant parts should be buried or burned.
2. **Clean tools and equipment.** Vehicles, harvesters, tractors, trailers, sprayers, hand tools, and other equipment that enter the infested vineyard must be pressure washed before moving to another vineyard.
3. **Ensure workers are sanitized.** Workers in the infested vineyards should wear protective outerwear in the field to avoid moving mealybugs to new vineyards. Outerwear should be removed and safely disposed of or stored before moving to uninfested vineyards. Ideally these items would be disposable, but removing outer layers and removing them for laundering may also be acceptable. Hands and shoes should be cleaned when leaving an infested vineyard.
4. **Avoid moving bins between vineyards.** If bins must be taken to another vineyard after being on the infested property, they should be cleaned with soap and water.
5. **Notify facilities receiving grapes.** Grapes from the infested facility should be moved in an enclosed or covered truck. Receiving facility should be notified so that grapes are processed rapidly and the pomace treated appropriately.
6. **Safeguard unfermented pomace.** VMB can potentially survive the crushing process. Where potentially infested grapes are processed, the pomace generated should be placed away from host material and covered with black plastic for at least 4 weeks.

VMB was caught in my traps, I do grow grapes on site, but I was not quarantined. What should I do?

The actions mentioned above will not be required for non-quarantined properties but are recommended. Implementing a treatment plan and the best management practices in Action #3 will reduce VMB populations and help prevent its spread.

Further Reading

ODA's vine mealybug pest alert

<https://www.oregon.gov/oda/shared/Documents/Publications/IPPM/VineMealybugAlert.pdf>

Vine Mealybug in Oregon Resource Site by OSU Extension

<https://extension.oregonstate.edu/collection/vine-mealybug-oregon>