

Quarantine Pest Alert: Vine mealybug

Planococcus ficus



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INTRODUCTION

Vine mealybug (VMB), *Planococcus ficus*, was found in Oregon for the first time during the summer of 2021. OSU Extension detected VMB by pheromone trapping for males in vineyards in Jackson County. A control and monitoring program was initiated. A statewide survey found VMB at several sites in Douglas county and one site in Linn County.

VMB is a European species that was first found in CA in the early 1990s. Within about 15 years, VMB had spread throughout grape growing areas. It is one of the most important grape pests in CA and other areas of the world where grapes are grown.

In addition to grape vines, VMB has a broad host range of more than 24 plant families that includes important hosts such as apple, beet, potato, walnut and willow.

PEST STATUS

VMB poses a threat to grape and tree fruit production. VMB is a serious pest of grapevines, particularly as an important vector of grapevine leafroll viruses. If not controlled, the spread of leafroll viruses will significantly shorten the productive lives of vines and reduce grape quality. It has been estimated that leafroll virus and associated vine mealybug management costs CA growers between \$12,106 to \$91,623 per acre per year (Ricketts et al. 2015). Grapes used for wine are a high value crop in Oregon, valued at over \$208 million dollars in 2018.

As they feed, VMBs produce sticky honeydew allowing sooty molds to develop on leaves and hindering photosynthesis. Molds can develop on grape clusters and cause them to be unsuitable for consumption.



Vine mealybug female. Note the wax tails (filaments) are not more than $\frac{1}{2}$ the width of the body.

From California Dept. of Agriculture, <https://oda.fyi/jqb>

PREVENTION

The best way to keep VMB out of your crop is to use caution bringing people, equipment or plant material to your vineyard. Make sure workers are aware of VMB and that they clean equipment and check clothing after visiting potentially infested areas. Infested equipment is the primary means of mealybug spread (Haviland et al. 2006). Make sure that grafting material is pest-free and that stock acquired from California has been treated as required by Oregon's Grape Pests and Diseases Quarantine (ORS 603-052-0051). Because of its wide host range, VMB may be moved on many kinds of plants, such as nursery stock.

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HOW DOES IT MOVE?

VMB can actively move between plants, and nymphs may be passively dispersed by the wind. The wax on the nymphs and adults is sticky and can carry immature and adult VMB to new areas on clothing or equipment. Vineyard workers could facilitate VMB's spread. Movement of live plants and plant cuttings can also transport VMB.



QUARANTINE

A quarantine is in place. **Oregon's Grape Pests and Diseases Quarantine (ORS 603-052-0051)** places properties infested with this pest under quarantine. The quarantine has several components including restrictions on the movement of potentially infested plant material from infested sites, as well as setting sanitation requirements for personnel and equipment that visit infested sites.

WHAT CAN YOU DO?

Notify ODA if you believe you have found vine mealybug.

Make a report at the "Identify an Insect" page at
<https://www.oregon.gov/oda/ippm/insects-spiders/pages/identify-insect.aspx>

Email: plant-entomologists@oda.oregon.gov **Phone:** (503)986-4636

MORE INFORMATION

Oregon Department of Agriculture
 Insect Pest Prevention & Management Program
 26755 SW 95th Ave, Suite 101
 Wilsonville, OR 97070
 503.986.4636 | Oregon.gov/ODA

Vine mealybug found under bark. From the UC Riverside Center for Invasive Species Research.

<https://cistr.ucr.edu/invasive-species/vine-mealybug>

IDENTIFICATION

VMB females are typically 2 to 4mm in length (1/16th - 3/16th inch). Unlike other mealybug species in Oregon vineyards, VMB do not have long, wax tails. VMB is best detected using pheromone lured traps that attract males.

REFERENCES

Oregon Grape Quarantine, ORS 603-052-0051:
<https://www.oregon.gov/oda/programs/PlantHealth/Pages/Grape-Quarantine.aspx>

Ricketts, K.D., M.I. Gomez, S.S. Atallah, M.F. Fuchs, T.E. Martinson, M.C. Battany, L.J. Bettiga, M.L. Cooper, P.S. Verdegaaal, and R.J. Smith. 2015. Reducing the Economic Impact of Grapevine Leafroll Disease in California: Identifying Optimal Disease Management Strategies. Am. J. Enol. Vitio. 66(2): 138-147

Walton, V., A.J. Dreves, P. Skinkis, C. Kaiser, M. Buchanan, R. Hilton, B.R. Martin, S. Castagnoli and S. Renquist. 2009. Grapevine Leafroll Virus and Mealybug Prevention and Management in Oregon Vineyards. OSU Extension pub EM 8990. 4pp.