



## Vine to Wine Update

Oregon Wine Research Institute  
May 2016

Welcome to the *Vine to Wine Update*. This monthly e-newsletter is designed to inform you of news, information and events from the **Oregon Wine Research Institute**, highlighting our research programs and providing relevant information about the OWRI and our researchers. We continue to provide research-based viticulture and enology information for the Oregon wine industry. As always, we welcome industry input, so please ask **OWRI team members** questions from the vineyard or the cellar.



### May Communications and Outreach Update

*Danielle Gabriel, Communications and Outreach Manager*

The May OWRI seminar presented by Lindsey Thiessen, Ph.D student in Dr. Walt Mahaffee's lab, is now available on the OWRI website. She discussed the life cycle of *Erysiphe necator* overwintering and early season inoculum release. To watch this, or any other OWRI seminar, visit our website [here](#).

Dr. Elizabeth Tomasino, Assistant Professor, OSU, Pallavi Mohekar, Ph.D student, Dr. Tomasino's lab, Anthony Sereni, master's student, Dr. Tomasino's lab and Danielle Gabriel, Communication and Outreach Manager, attended the 2016 International Cool Climate Symposium in Brighton, England. The Symposium covered a number of topics including pests and disease, sparkling wine production and issues relating to climate change in the vineyard. Dr. Tomasino presented on the sensory aspects of Chardonnay and Pallavi provided an update on the brown marmorated stink bug. Graduate students Mei Song, Alison Reeve, and Anthony Sereni had research posters in the poster session. After the event, the group toured various vineyards and wineries in the area to learn more about wine production in England. Make sure that you are following the blog; in-depth summary of the event will posted soon.

The end of May wraps up a busy outreach season for OWRI team members. Our annual Vineyard Scouting Workshop was held in the beginning of May and Program Coordinator Mark Chien provides a recap on the event below. As we wind down our outreach events and gear up for summer research and fall programming, we wish you the best in the vineyard preparing for véraison and harvest.

Cheers!

### Viticulture Extension Update: Raising Trunk Disease Awareness

*Dr. Patty Skinkis, Viticulture Extension Specialist & Associate Professor*

There has been an increase in the number of reported cases of stunted vine growth and potential trunk disease this spring in the Willamette Valley. The symptoms ranged from delayed bud break to lagging shoot growth compared to healthy blocks, and in some cases led to shoots with distorted and almost tattered-looking leaves. The symptoms looked different than the typical culprits of herbicide drift, frost damage, rust/bud mite feeding, or micronutrient deficiency. Upon closer inspection by sawing into cordons and trunks, significant cankers (dead areas within the vine trunk) were found, and this suggested the potential cause of the limited shoot growth. Although visual symptoms suggested trunk disease, samples were submitted to OSU Plant Clinic to confirm which disease organisms may be causing the damage.

Knowing what trunk disease organisms are present is helpful in understanding next steps for managing the disease. Dr. Melodie Putnam, OSU Plant Clinic Director, summarized the importance of identifying the disease-causing organisms and provides visual examples of trunk disease symptoms in a seminar archived online [here](#). Trunk disease has become more of a "hot topic" in recent years both nationally and internationally. In 2015, Dr. Jose Urbez Torres visited OSU and growers in the north Willamette Valley and southern Oregon to share his expertise and research about trunk diseases in California and British Columbia. His archived seminar is available online [here](#). Research on trunk diseases of grapevines is currently being led by Dr. Kendra Baumgartner, a USDA-ARS plant pathologist from Davis, CA. The work is funded by a federal grant and is aimed at understanding both basic and applied aspects of managing trunk diseases in grapevines and other tree fruit and nut crops. You can learn more about the research [here](#).

Grapevine trunk diseases don't lead to immediate vine decline. The vine symptoms that are being expressed this spring are likely due to infection years ago, and the vineyards are just now showing the symptoms due to some prior vine stress. The two record breaking yield and heat/drought vintages of 2014 and 2015 may have led to more nutrient and/or water stress that could lead to poor nutrient or carbohydrate storages for early spring growth. The research team on the federal trunk disease grant are working to understand how [water stress](#) impacts the disease.

Please see the links below for more information.

- [Do you have trunk disease?](#)
- [SCRI Trunk Disease Project Website](#)
- [Recognize the Symptoms and Causes of Stunted Growth in Vineyards](#)

## **Get Prepared for Bloom-Time Nutrient Sampling**

*Patty Skinkis, Viticulture Extension Specialist, OSU*

*Paul Schreiner, Research Plant Physiologist, USDA-ARS*

There are two main points in the season that vines can be sampled for nutrient status: bloom and véraison. It is critical to sample at these times as the current nutrient sufficiency and deficiency thresholds are based on these specific stages of vine growth. As we draw near to bloom, consider if you will do tissue sampling now or at véraison and how you can prepare yourself for tissue sampling.

Sampling at bloom is most useful for diagnosing micronutrient deficiencies or more severe macronutrient problems. It is best to sample vines when the vineyard has reached approximately 60-70% bloom. Collect leaf blades or petioles from the same node as a cluster (opposite a cluster). If you are trying to diagnose a nutrient problem based on observed symptoms, it is best to submit multiple samples. Collect separate samples from healthy areas and symptomatic areas. Be sure to collect enough tissue when sampling (1 sample = 60-100 petioles or 20-40-leaf blades).

For more details on how to collect samples and interpret the results, see [Monitoring Grapevine Nutrition](#). Another good resource to consider is [Grapevine Nutrition](#), an interactive online module that provides a wealth of information on grapevine nutrition and monitoring.

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## **RESEARCH UPDATE: Pest Management Strategic Plan for Oregon Wine Grapes**

Using an Oregon Wine Board research grant, members of the OSU Integrated Plant Protection Center have developed a Pest Management Strategic Plan (PMSP) for Oregon wine grapes that will help the industry identify short and long-term pest management challenges, goals and strategies for success. The PMSP details current major pests and management practices and prioritizes a number of research, regulatory and educational needs and projects for the industry related to the major pests discussed. It is a unique document that captures stakeholder needs and priorities in a formally recognized process.

Last fall, the PMSP team of Joe DeFrancesco and Katie Murray put together an official workgroup for this project consisting of 29 growers, consultants, researchers and extension agents. In November and December, regional meetings were held in three wine regions: Eastern Oregon, Southern Oregon and the Willamette Valley. The meetings were advertised with the help of OSU extension agent networks and were open to anyone interested in attending. There were 12 attendees in Eastern Oregon, nine in Southern Oregon and 28 in the Willamette Valley. These meetings successfully gathered initial information about major pests and needs specific to each region and this information was used to draft the PMSP document.

In February, 21 members of the official work group members, along with an additional five observers, worked together at a full-day session to refine the draft PMSP document. The document is now in its final stages and should be posted online at the Western IPM Center within the next several weeks. At that point, the document can be downloaded and shared widely within and beyond the industry as needed. Once finalized, the Oregon wine grape industry can begin to use the PMSP as a roadmap to address specific and targeted pest management issues identified by the PMSP process.

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## **2016 Vineyard Scouting Workshop Recap**

*Mark Chien, OWRI Program Coordinator*

The OWRI hosted our annual vineyard scouting workshop at Seven Hills Vineyard in Milton-Freewater on May 4. Our scouting workshop is delivered in modular form so participants can

interact more closely with researchers who are presenting in the area of their expertise. It's a great way for growers to learn about current pest and disease challenges in the field from researchers.

Over 50 grape growers divided into four groups and rotated among the four modules including powdery mildew detection, crown gall, sprayer optimization, insect pests and viruses and vine water stress monitoring. Each participant received a copy of the *Field Guide to Clean Plants and Quarantine for Grapes in Washington State* (M. Moyer, N. Rayapati, R. Steigmeyer) and the *Field Guide for Integrated Pest Management in Pacific Northwest Vineyards* (M. Moyer, S. O'Neal), as well as a lighted hand lens and a special device that allows the user to take macro photos with a smart phone.

Dr. Walt Mahaffee, Research Plant Pathologist, USDA-ARS discussed powdery mildew biology, addressed recent concerns about resistance and assisted growers with detection and identification. Dr. Michelle Moyer, Assistant Professor, Washington State University, presented samples of crown gall, its identification and prevention options.

Steve Castagnoli, OSU Extension Hood River, and Gwen Hoheisel, Regional Extension Specialist, WSU used an air blast sprayer to demonstrate optimal settings for spraying grape vines. Dr. Vaughn Walton, Associate Professor & Extension Entomologist, OSU, presented information about brown marmorated stink bug, an invasive insect that can taint wines if present above threshold levels in the production process. Dr. Bob Martin, Research Plant Pathologist, USDA ARS, discussed virus identification using samples of affected grapevines and also grapevine red blotch virus. Dr. Patty Skinkis, Viticultural Extension Specialist & Associate Professor presented visual symptoms of grapevine water stress and vine water status monitoring tools such as the pressure bomb and leaf porometer.



Dr. Patty Skinkis presents the grapevine water stress module at lunch.



Growers inspect infected vines with a portable microscope in Dr. Walt Mahaffee's module



Dr. Michelle Moyer presents a module on Crown Gall.

The OWRI would like to thank Sadie Dury, Seven Hills Vineyard Manager, and her crew for hosting the workshop, our colleagues from Washington State University, their graduate students who acted as group leaders, and all the OWRI team members involved in the event.



Steve Castagnoli and Gwen Hoheisel present a module on air blast sprayers.

## Woodhall Update

The improvements and enhancements at Woodhall continue. The new road has been completed, the deer fencing has been renovated, and the vines planted last year are strong and healthy. Right now, the vineyard is at 5% bloom, and our vineyard manager, Josh Price, is busy with early season canopy management. Over the last two weeks, students have been visiting the vineyard to assist with shoot positioning, suckering, shoot thinning and catch wire movement. Stay tuned for more updates from Josh Price as developments progress.



## **New and Updated Extension Publications Available!**

### **How to Monitor for Brown Marmorated Stink Bug in Specialty Crops**

N. Wiman, D. Dalton, L. Brewer, P. Shearer, and V. Walton

The invasive brown marmorated stink bug is a serious threat to Oregon specialty crops, including hazelnuts, tree fruits, small fruits, vegetables, and wine grapes. This insect pest also attacks ornamentals, agronomic crops and native plants in Oregon. This guide contains monitoring information on BMSB, including using beat sheets, pheromone traps, and visual observations. View the document [here](#).

### **2016 PNW Insect Management Handbook**

Editor: Craig Hollingsworth

This handbook is intended as a tool for making decisions regarding the control and management of important insect pests in the Pacific Northwest. Each section describes pests, the damage they cause, and recommended management practices. It also contains information on pesticide safety and toxicity, adjuvants, mixing tables, calibration, and biological control. The March 2016 revision contains significant updates throughout the handbook, and revision dates are listed at the beginning of each article. View the document [here](#).

### **2016 PNW Plant Disease Management Handbook**

Editors: Jay W. Pscheidt and Cynthia M. Ocamb

This is a comprehensive guide for plant disease management in the Pacific Northwest. The newest edition contains updates to host and disease descriptions and revisions of several pathogen and pesticide articles. It also contains an alphabetical listing, by host plant, of diseases, including their causes, symptoms, and recommended cultural and chemical controls. View the document [here](#).

## 2016 PNW Weed Management Handbook

Editor: Ed Peachey

This is a comprehensive guide for weed management for the region. It is authored by Extension specialists from throughout the Pacific Northwest, and provides information on weed management strategies, herbicide lists, herbicide resistance, and more. View the document [here](#).

Have a particular topic or question you would like to see addressed in the Vine to Wine? Let us know.

Danielle Gabriel  
Communication and Outreach Manager  
541-737-3620  
[Danielle.Gabriel@oregonstate.edu](mailto:Danielle.Gabriel@oregonstate.edu)



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