

# OSU Wine and Grape Research and Extension Newsletter



July 2007

<http://wine.oregonstate.edu>

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## Welcome to the July 2007 Newsletter!

The growing season is in full swing. As growers are busy doing canopy management in the vineyards and wine makers are preparing for the upcoming vintage, OSU faculty are working hard on their field research trials and extension programs to advance viticulture and enology research and education.

We've been busy over the past few months providing programming to growers and wine makers. In May, the Food Science and Technology faculty coupled with the Oregon Wine Board in presenting a "Wine Texture & Tannins" Workshop in Portland and Roseburg. We've made an effort to visit vineyards of the different regions in the state. Patty

Skinkis, Vaughn Walton and James Osborne visited with growers in the Umpqua for the "Umpqua Valley Grape Day" in early June where they presented on such topics as Short Shoot Syndrome, Phylloxera and Grape Maturity. Patty Skinkis and Marilyn Miller visited vineyards in Southern Oregon in early June and presented a seminar on crown gall research and applications for Oregon growers. This July, James Osborne will be presenting a seminar on grape maturity and hang time with growers in the Rogue Valley. Furthermore, in early August a group of researchers and extension faculty will visit the various AVAs in Southern Oregon for their annual vineyard problems tour. In the upcoming months, we will be planning additional educational programming for growers throughout the state, including a beginning grape grower's series "Vine Ventures," to be held in Roseburg in August and Bend in late October, and grape maturity workshops in September for both the Willamette and Hood River areas.



We look forward to the many opportunities to work with members of the industry throughout the state. We welcome your comments and suggestions.

*The OSU Winegrape Team*

## Vineyard Pest Report: Dealing with Mites and Insect Pests

*Dr. Vaughn Walton, Extension Horticultural Entomologist*

*Dr. Patty Skinkis, Viticulture Extension Specialist*

### Evaluating Summer Symptoms of Short Shoot Syndrome

In April of this year, we discussed the influence of rust and bud mites on the "Short Shoot Syndrome" (SSS) noticed in some vineyards throughout the state. However, now that the vine shoot growth has skyrocketed, it is easy to forget the problems that were evident in spring.

The appearance of your vineyard can be fooling at this time of the season. It often looks as if vineyards have grown out of SSS. This is the period when crop losses due to short shoot become more apparent. A good way for growers to determine damage is to investigate areas that displayed SSS during the early part of the season. An indication of damage due to mite infestations during the early part of the season is the lack of clusters on actively growing shoots (Fig. 1). In many cases, these are secondary shoots that have replaced primary shoots that died due to damage caused by eriophyiid mite feeding during the beginning of the season. In some cases the primary shoots can still be seen, and these are usually much shorter than unaffected shoots and usually have a few small clusters or an absence of fruit altogether (Fig. 1).

This is the time of the season when flower/cluster (Fig. 2) necrosis starts to take place in areas of the vineyard that showed early season SSS. Such symptoms become more visible as the season progresses. Flowers that looked normal during the early part of the season sometimes fail to form full clusters. These are often much smaller than unaffected clusters. This phenomenon is supported by data in our trial sites where damage symptoms increased as the season progressed.



Fig. 1. In this picture the shoot on the left is the primary shoot with visibly shorter internodes and small bunches with ten berries or less. The shoot on the right is the secondary shoot with no feeding damage or fruit. Usually the shoots do not have shorter internodes.



Fig. 2. The flowers on the left are showing necrosis and will eventually die, compared to flowers on the right taken from a shoot that did not show SSS.

A relatively easy method to determine crop losses can be used directly before harvest. Fruiting canes with no clusters or clusters containing fewer than ten berries equates to 100% crop loss. Fruiting canes with one or more normal-sized clusters has 0% crop loss. Assess damage on 10 fruiting canes per vine and determine damage levels on ten

evenly spaced vines in the affected area. To obtain an estimate of crop loss, sum up the value (100 in total) and divide by 100.

It is important to remember and document where these symptoms were found in the vineyard. This information will help you to decide whether action should be taken to control symptoms caused by eriophyiid mites during the following season. Rust mites which have been correlated with short shoots displaying typical SSS symptoms persist on the vine and feed on leaves throughout the season. Feeding on leaves may lead to leaf bronzing in the upper 1/3 of the vine's canopy, becoming apparent in September.

### Short Shoot Syndrome Survey

All growers in the state will receive a survey on Short Shoot Syndrome this month. It will involve an online survey that aims to determine how widespread SSS is throughout the state and identify management practices that may be underlying causes of SSS and the high populations of eriophyiid mites often observed in effected vineyards. It is important that all growers are involved in this survey. If you do not have online access, a questionnaire can be mailed to you by contacting Patty Skinkis at 541-737-1411. After the questionnaire is complete, crop loss assessments will be done in late August and September in randomly selected vineyards that have SSS.

### Grape Twig Borer

Twig borer can be a problematic vineyard pest in some areas of the state. Growers in Southern Oregon have dealt with this pest in the past. However, recently several growers in the Willamette Valley have had problems with the cane borer. These insects can cause problems in grafting as they bore into and colonize one year old growth. Generally, twig borers can be found in older vineyards and/or in vineyards near riparian zones. Both adults and larvae damage the grapevine. Larvae bore into wood and remain in the canes for 10 months, emerge as adults in spring. Adults bore into the base of fruiting canes. Damage can be extensive, leading to wilted shoots on affected vines. This wilting mimics botrytis infection. Examine the base of the wilted canes for small holes and necrosis, which will indicate twig borers. If chemical control is necessary, it must be done in early spring prior to boring into the cane and laying eggs. In general, cultural control by removing brush after dormant pruning can alleviate this problem. For more information, please check out the following website:

<http://www.ipm.ucdavis.edu/PMG/r302301211.html>

**In the next issue...** We will discuss Grapevine Leafroll Virus, which is an important problem in California and Washington vineyards. This virus is present in certain areas in Oregon and it is of utmost importance to monitor new areas of outbreak, even if it is single vines. We plan to discuss symptomology and vectors of this important virus in vineyards found worldwide. Symptoms of this virus are usually most visible during the latter part of the season (end of August to early October). Oregon growers are encouraged to investigate their vineyards for these symptoms as early detection may help to limit its spread in the state.

## Regional Viticulture: Umpqua Valley Winegrower Activities

*Steve Renquist, Extension Horticulturalist, Douglas County*

Spring and early summer is always an active time in the vineyard, but it has also been an active time for the Umpqua Valley Winegrowers Association.

Our association board continues to focus on marketing ideas to enhance public awareness of the Umpqua Valley as a fine wine producing area conveniently located off Interstate 5 in Southern Oregon. We have produced an excellent new postcard that has been placed in heavily visited tourist locations all up and down I-5, and in Central Oregon tourist locations. Early responses to the card have been excellent.

The board and wineries were very pleased with our annual barrel tour results which occurred in April and May. The number of visitors our wineries served this spring grew significantly as we add more wineries to our tour. The barrel tour is now making separate loops to visit all our sites. We have a north county loop and a central county loop. We have discovered that these two barrel tours are the best fundraisers we have for our Winegrower Association chapter since they require far less set up time and have fewer costs than our gala evening events.

Our educational Grape Day event in early June was very well received by local growers. We invited our newer OSU faculty from Corvallis to join us in the day long event. Patty Skinkis spoke about Phylloxera prevention, identification, and management. Vaughn Walton spoke about rust mites, bud mites, and short shoot syndrome relationships and control ideas. James Osborne also joined us and discussed hang time and quality issues with wine production. During our field visits to Abacela Vineyard recent OSU horticulture graduate Alex Cabrera discussed the process of field grafting grapevines. Alex and Earl Jones also discussed irrigation management tools that are new to Abacela and the Umpqua Valley. Our final stop of the day was at Reustle Prayer Rock Vineyard, where owner Stephen Reustle spoke to the group about the process of matching grape varieties to climate and site, a process made popular by Dr. John Gladstones. Steve Renquist spoke about methods to improve soil structure and vineyard practices that are harmful to soil structure.

Our wine grower group has also been working closely with Umpqua Community College in their effort to develop a viticulture and enology training center at the college that will prepare local people from Southern Oregon for the rapidly expanding viticulture industry in the south. We completed a series of focus groups with the Umpqua Valley wine industry that were very positive about the project. Support from the Rogue and Applegate Valley wine industry has also been strong, and focus group activities will be held in the near future.



## Monitoring Grapevine Nutrition with Plant Tissue Tests

*Dr. R. Paul Schreiner, Research Plant Physiologist, USDA-ARS*

*Dr. Patty Skinkis, Viticulture Extension Specialist, OSU*

Managing and understanding grapevine nutrition can be a daunting task. Mineral nutrients are important to the entire vine as they play vital roles in plant biochemistry. An effective nutrient management program for vineyards is intensive and requires good records of fertilizer and irrigation inputs, vigor assessment, yield and interpretation of soil and plant tissue testing. At this time of the year, many growers have already taken bloom tissue samples or may be planning véraison sampling for analysis.

Soil testing is generally not useful in predicting vine nutrient status due to a variety of issues, such as; differences in nutrient uptake or requirements of different varieties, clones and rootstocks, differing irrigation and soil management practices, and the plasticity of vine roots to explore soils in different environments. In addition, grapevines can store significant quantities of some nutrients to overcome short term deficits of soil supply, and this ability increases with vine age. For example, more than 50% of the canopy N and P came from stored reserves in the roots and trunks of non-irrigated 'Pinot noir' vines at Woodhall Research Vineyard (Schreiner et al. 2006). Soil analysis is useful in monitoring changes over multiple years, including pH and soil organic matter that can impact nutrient supply in soil. Of course, soil analysis is necessary in determining potential vineyard planting sites. Yearly soil tests are not recommended for perennial crops.

Plant tissue testing is the preferred method of monitoring the nutritional health of your vineyard(s). Many winegrape growers collect petiole samples from their vineyards every year (or two) and send them to a testing lab for analysis. Quite often the lab results end up in a desk drawer unless something appears alarming. Nutrient testing can be more useful if consistent, representative samples are collected year to year. It is also important to understand and correctly interpret tissue analysis data.

*for the rest of this article click [here](#)*

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## Getting the Feel for Wine Texture

*Dr. James Osborne, Extension Enologist*

Recently, Jim Kennedy, Alan Bakalinsky and I presented a one-day workshop on wine texture to winemakers and growers in Roseburg and Portland. A big “thanks” to all who were able to attend. Your questions, comments, and feedback were much appreciated and contributed to the overall success of the day. I thought I’d take this opportunity to provide a summary of the workshop discussions as wine texture is an important wine quality parameter that is of interest to the Oregon industry.

Wine texture is the sensation of a wine on the palate. It can range from silky smooth to drying, coarse, and downright unpleasant. Along with color, taste and aroma, the texture of wine can be a determining factor of its quality and relative price point. The sensation of texture is primarily due to the interaction of tannins with salivary proteins in the mouth. Tannins bind to these proteins which reduces lubrication. However, it is not quite that straightforward. Other components in the wine also influence how we perceive wine texture. Sugar, ethanol,  
*for the rest of this article click [here](#)*

## Viticulture and Enology Program Graduate Spotlight

*Dr. Patty Skinkis, OSU Viticulture Extension Specialist*

Travis Cook, a recent graduate of the undergraduate Viticulture Program in the Department of Horticulture, was first introduced to the world of winegrapes when a small wine shop opened in his hometown of Baker City, OR. Cook grew up with agriculture on his family’s farm and saw the opportunity that viticulture had to offer for the state.

“After taking an interest in wine, I figured with my farming background and fondness of the outdoors, the vineyard was the place for me,” states Cook.

Travis began as one of the first cohort of students in the OSU Viticulture undergraduate program in 2003. When asked what he liked most about the OSU Viticulture and Enology program, Travis replied, “... the faculty and staff’s willingness to work with me, and the materials covered in the program.”

As part of the program’s hands-on approach, students visit the Woodhall Research Vineyard. Upon Travis’s first visit for class, he was very interested in working with the management, education and research that takes place there. Travis soon became a student worker at the OSU Woodhall Research Vineyard where he has worked from 2006-2007, learning to manage everything from pruning to shoot positioning, hedging, and most of all, time.

“I was able to immerse myself with every aspect of the vineyard and not just a small part. This may not have been possible if I had went somewhere else,” Travis recalls.

Cook graduated this May with his BS. He is now the assistant vineyard manager at Spindrift Wine Cellars in Philomath, Oregon, where he is proud to be working to produce high quality grapes for wines of the South Willamette Valley.

## Upcoming Viticulture and Enology Events

July 13 – Columbia Gorge Winegrower’s Association Summer Membership Meeting. 5:30 PM Wind River Cellars, Husum, WA. RSVP by July 10. Contact Thayne Cockrum at 1-866-413-9463 or check out <http://www.columbiagorgewine.com/members.htm> for more information.

August 2-- Southern Oregon Vineyard Tour & Annual Industry BBQ  
8 AM – 6 PM. The tour will start at the Southern Oregon Research and Extension Center, Central Point. The BBQ will be held at Del Rio Vineyards. RSVP by July 15 by calling Phil VanBuskirk 541-772-5165.

August 3—Columbia Gorge Vineyard Field Day. For more information, contact Steve Castagnoli 541-386-3343.

August 18 – Vine Ventures: Guiding Vineyard Establishment, Management and Winemaking. This workshop will be held from 9 AM – 4 PM at the Douglas County OSU Extension Office. Registration is required. Please see <http://wine.oregonstate.edu> for more information.

September 14 – OSU & Chemeketa Collaborative Grape Maturity Workshop  
9:00 – 4:00 PM NW Viticulture Center at Chemeketa. Registration is required. Please see <http://wine.oregonstate.edu> or <http://www.chemeketa.edu/aboutus/locations/eola/news.html> for more information.

September 20 – OSU Grape Maturity Workshop  
9:00 AM – 1:00 PM Hood River Extension Office, Hood River, OR. Registration is required. Please see <http://wine.oregonstate.edu> for more information.