GRAPE TALK

Red grape leaves are pretty but…

BY DEBBIE TOLLEFSON

Debbie Tollefson

As a rural realtor, I often show vineyard properties for sale in the Applegate Valley. Late last summer while walking with a buyer, I noticed beautiful red leaves on some of the vines. I thought the leaves were especially pretty with their unusual red veins. A few weeks later, though, I learned about grapevine red blotch-associated virus (GRBaV).

Vaughn Walton, an associate professor of horticultural entomology at Oregon State University (OSU)-Oregon Wine Research Institute in Corvallis, leads a research program on the biology of horticultural insect pests, especially those associated with grapevines. He has worked with thrips, leafhoppers, treehoppers, mealybugs, rust mites, phylloxera (a species of lice that preys on vines), and stinkbugs in vineyards. Dr. Walton's lab was the first to record the spread of grapevine leafroll and red blotch viruses in Oregon.

The red blotch virus is one of over 60 different viruses identified in grapevines since the 1960s. It was already prevalent in California when it was first observed in Oregon in 2009. Red blotch differs from most grapevine-infecting viruses in that it has DNA (deoxyribonucleic acid) rather than RNA (ribonucleic acid), so identification depends on genomic tools. DNA testing of a specimen from the early 1940s at University of California, Davis, proved the presence of red blotch in Sonoma County decades ago. The virus is moving very slowly in the Willamette Valley, but is spreading quickly in southern Oregon and the Applegate Valley. So far it has not been reported in vineyards outside North America.

Like leafroll disease, red blotch causes a reddening of the basil leaf margins from late August through September. Unlike leaves affected by leafroll, however, the red-blotch leaf stays relatively flat and the green veins often change to pink or red. Red blotch can affect both mature and new leaf plantings. The disease can be confirmed only through DNA-based analysis, since visual diagnosis can be complicated by the multiple viruses that could be infecting the vines and by the fact that a vine with no symptoms can often test positive for the virus.

Vaughn Walton, associate professor of horticultural entomology at OSU-Oregon Wine Research Institute, Corvallis.

Richard Hilton, entomologist at Southern Oregon Research and Extension Center (SOREC), OSU's extension service in Jackson County, says, "The identity, biology, and management of potential red blotch vectors is currently a major topic of research at SOREC."

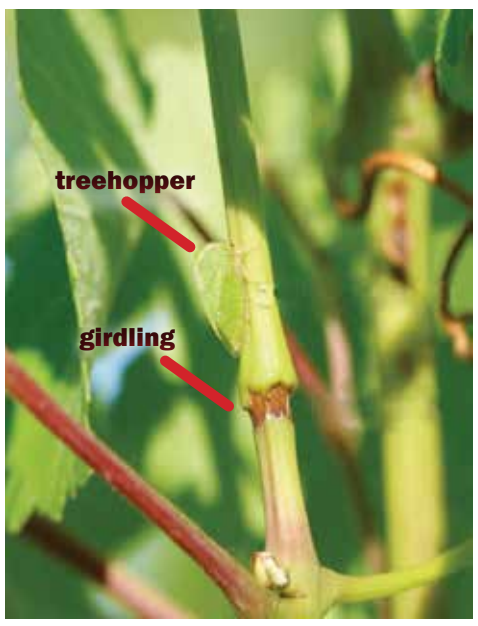
These and other scientists are studying the causes of this new virus, the vectors spreading it, and the effects of the disease on grapes and the wines produced from those grapes. Effects include reduced yields, reduced sugar content, delayed fruit ripening, reduced production weight, elevated acidity, diminished color, and altered tannins.

Using infected scion and rootstock in grafting can spread the disease. Other factors could be insect vectors, including suckers like leafhoppers and treehoppers, drought and other environmental stresses, soil conditions, and fungal pathogens.

Vineyard owners need to be sure they are using scion and rootstock that have been tested with a DNA-based molecular test. Treating plants for treehoppers, the most likely vector, may help prevent further infestation and slow down the spread of red blotch.

It's not just vineyard owners who should be grateful to the work being done to identify the vectors that spread this disease and to find a solution for it. Because red blotch virus affects grape quality, valley economics, and, ultimately, the taste of our wines, we should all be grateful!

Debbie Tollefson
debbie.avrealty@gmail.com



Treehopper adult feeding on cane, causing girdling.

About one week after girdling, the leaf or cane will change color.

Quady North viognier is Editor's Choice

Quady North 2015 Steelhead Run Vineyard Viognier is Editor's Choice and received 93 points in *Wine Enthusiast's* June 2017 Buying Guide. Also listed are Quady North 2015 Eevee's Vineyard Grenache Blanc (91 points), Quady North 2013 Mae's Vineyard Syrah (91 points), and Plaisance Ranch 2014 Carmenère (90 points).

Lomakatsi partnering on Upper Applegate Road Demonstration Project

BY SHANE JIMERFIELD

The Applegate watershed hosts an amazing diversity of wildlife habitat, forest types, and recreation opportunities. It provides clean drinking water to homes and businesses and water for irrigating farms and orchards. But a changing climate and decades of fire suppression are threatening its ecosystems and human communities that depend on the forest for their quality of life and clean water.

Lomakatsi is a nonprofit ecological restoration, education, and training organization. For more than 22 years, it has worked across the region in partnership with agencies, communities, schools, tribes, organizations, and private property owners to restore ecosystems and increase the sustainability of ecosystems, communities, cultures, and economies.

Lomakatsi is excited to again partner with the US Forest Service (USFS), the Bureau of Land Management, and the Nature Conservancy to bring its extensive individual and collective experience in ecological forest restoration to the Upper Applegate Road Demonstration Project. The project will demonstrate four treatment alternatives in close proximity to each other so that scientists and the public can evaluate the results of different treatment types. (See article by Don Boucher in the spring 2017 *Applegater*.)

The partnership has been seeking community participation in the project, including offering public tours of the sites to increase knowledge of the project.

This spring Lomakatsi's forestry technicians have been preparing demonstration sites for treatment, marking trees to be removed on all four treatment sites. Although none of the treatment alternatives has a timber focus, small-diameter trees will be removed as a by-product of restoration effort. Sale of these small-diameter logs will help fund additional restoration work. This commercial timber harvesting is scheduled for May through July and will utilize a helicopter for yarding. Although a helicopter is expensive to use, helicopters provide the lightest touch on the land, a high priority to Lomakatsi. Minimizing on-the-ground impacts to vegetation and soil is important ecologically and significant to the evaluation of results.

Working with USFS, Lomakatsi's technicians and inspectors will oversee the project, supervising contractors to ensure they are meeting treatment specifications and following guidelines. Lomakatsi will periodically monitor project sites to measure and compare the effectiveness of the different treatment types.

In fall 2016, community members and representatives from the Applegate Neighborhood Network, Applegate Trails Association, US Forest Service, The Nature Conservancy, and Lomakatsi reviewed the project sites and discussed the project's design and objectives.

In the fall, Lomakatsi's technicians and restoration saw crew will be completing the treatment prescriptions by carrying out noncommercial thinning. When thinning activities are completed (anticipated in November), Lomakatsi will offer a public tour to review the immediate outcomes. Slash pile burning should be completed within two years.

Project partners and community members are hopeful that this collaborative process can be carried forward into a larger community-supported project over the next few years in the Upper Applegate Watershed. Learn more about that project on page 13 of this *Applegater*.

Shane Jimerfield
Program Director
Lomakatsi Restoration Project
shane@lomakatsi.org