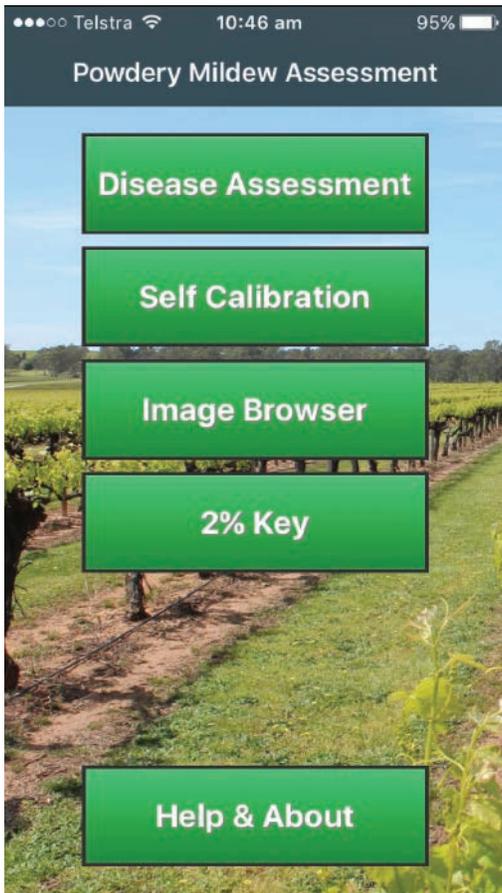


BY JANICE CESSNA

Mobile Powdery Mildew App Unveiled Globally



PMapp supports vineyard staff in assessing and tracking powdery mildew.

The University of Adelaide has made PMapp available for download outside of Australia. The app, available for iPhone and Android, supports vineyard staff in assessing and tracking powdery mildew. “PMapp can be used anywhere anyone is assessing the severity of powdery mildew on grape bunches,” says Eileen Scott, project leader and professor of plant pathology in the University’s School of Agriculture, Food and Wine. Developed in collaboration with Lemur Software, with support from Wine Australia and considerable input from the Australian wine community, PMapp was proven to be a powerful assessment and quantification tool during Australia’s 2016 season.

“PMapp is a simple tool that helps users record disease severity and incidence data as they walk through the vineyard,” says Scott. Because powdery mildew occurs on berry surfaces, the percent surface area that the disease covers serves as a measure of its severity. Using a series of computer-generated images that depict increasing disease severity, the mobile app facilitates comparison

NEWS FLASH

Sonoma County Winegrowers Announce Ag Sustainability Center

Sonoma County Winegrowers (www.sonomawinegrape.org) is quickly closing in on its goal of becoming the nation’s first 100% sustainable wine region by 2019. According to its latest report, 85% of the county’s vineyard acres have completed the sustainability self-assessment and 60% of the county’s vineyard acreage has been certified sustainable. The group will now establish the Sonoma County Center for Ag Sustainability to enable winegrowers to identify and focus on the most challenging problems facing the local wine community to ensure its continued success.

Niner Wine Estates Donates \$22,050 to Local Charities

Niner Wine Estates has awarded two nonprofit organizations in San Luis Obispo County with money to fund local projects. The company focuses on supporting organizations that directly support the local community and reflect its own business philosophies. In 2016, these organizations included GleanSLO and must! Charities, both of which serve San Luis Obispo County residents. Over the last two years, Niner Wine Estates has put more than \$55,000 back into the local Paso Robles community through its community outreach program.

Rodney Strong Pathways Program Announced

Rodney Strong Vineyards and the Wine Business Institute (WBI) at Sonoma State University (SSU) are launching the Rodney Strong Pathways Program to bring a broad range of talented students to SSU and provide them with a better educational experience to foster their academic career and life success. This \$250,000 gift will provide critical resources for SSU to develop this co-curricular program and will support the completion for the Wine Spectator Learning Center, a new education and industry hub designed around advanced-technology classrooms, student commons and gardens and a collaborative space for faculty and industry leaders.

Michigan Wine Month Moves to May

Michigan Wine Month will take place during May following a decision by Michigan’s Grape and Wine Industry Council. The change from April to May will take effect this spring. May kicks off a season of travel in Michigan, and the majority of wineries expand their hours to accommodate increased tourism. Warmer weather in May also makes it more desirable for travelers starting to plan their summertime wine touring. Michigan’s thriving wine industry has 125 wineries and five major wine touring regions. Wineries welcome more than 2 million visitors to their tasting rooms each year.

For more industry news briefs, visit the News Flash page on V&WM’s website: <http://www.vwmmedia.com/magazine/web-exclusive1.asp>.

of these images with vineyard disease occurrence and more precise determinations of real-time severity. The app also calculates the disease incidence, or percentage of bunches affected, logs their GPS coordinates and reports both severity and incidence data via email for later analysis.



Eileen Scott, project leader and professor of plant pathology in University of Adelaide's School of Agriculture, Food and Wine, says the app can help all sizes of growers but may be more powerful for larger operations.

Scott feels PMapp helps all sizes of growers, but recognizes it may be more powerful for larger operations. "The efficiency gains for large growers will be larger because the app should make it easier to manage data collected by multiple assessors, as the results of the in-field assessment can be emailed by the assessor direct to his or her manager," says Scott. "The email cover message would contain the details of vineyard and block, assessment strategy plus any other information required can be added via the notes facility."

Since powdery mildew can be difficult to distinguish from other diseases, spray residue or dust, PMapp has a supporting website (www.pmassessment.com.au) that offers additional resources to help train new staff and refresh the skills of experienced staff. These include a collection of photographs showing powdery mildew symptoms of varying severities on diverse grape bunches to advance users' disease identification skills and a tool for severity estimation training. The website also offers a guide to vineyard assessment.

PMapp was created specifically to aid personnel in identification

and assessment of powdery mildew, but some pilot users have realized its usefulness with other diseases. "Although PMapp was developed for assessing the severity of powdery mildew, we used the app for bunch rot assessment as well," says Ian Macrae, who works as a viticulturist with CCW Cooperative Ltd., based in the Riverland of South Australia, a wine-grape growers' co-op of almost 600 members. "Accurate assessment of severity is required when the patch is facing possible rejection. PMapp was a great tool in making decisions acceptable to both grower and winery."

Scott also says she had inquiries from the United States, Chile, Germany, Italy and New Zealand about global availability soon after the Australian pilot began in December 2015. "Representatives of Accolade Wines and Treasury Wine Estates indicated they're keen to use the app in their U.S. operations. In addition, two members of our project steering group, who are now based in the United States, took part in the early stages of development and can now use it in their current positions." You can find PMapp in Apple's App Store or Google Play.

Sequencing Breakthrough Advances Genome Studies



Bruce Reisch, professor at Cornell University's School of Integrative Plant Science, believes genome sequence data is just the beginning.

A powerhouse partnership of scientists representing nine different institutions has developed two new computer algorithms capable of mapping complex genomes in unprecedented, contiguous detail. Called FALCON and FALCON-unzip, the open-source algorithm was initially tested on several plant species, including Cabernet Sauvignon under the guidance of Dario Cantu, plant geneticist with the UC Davis department of viticulture and enology. "The new [sequencing] process provides rapid access to genetic information that Cabernet Sauvignon has inherited from both its parents, enabling us to identify genetic markers to

use in breeding new vines with improved traits," says Cantu in a UC Davis press release.

A genome of *Vitis vinifera* was previously sequenced in 2007. However, the sequencing technology at the time didn't convey the full details wrapped in the comparatively simple *V. vinifera* genome and hasn't been very effective with complex, diploid genomes, including cultivars like Cabernet Sauvignon. Diploids have duplicate chromosomes, one sourced from each parent. Most sequencing algorithms ignore one chromosome entirely, which can leave out unique genetic details found nowhere else. "Having just one