

Pest & Disease



The importance of controlling phylloxera spread

Drew Noon with one of several new Vinehealth signs that Noon purchased to place where visitors can see it. Image courtesy Noon Wines.

Grape phylloxera is a small but damaging pest that feeds on vine roots, decimating vine vigour and resulting in the death of the vine. Originating in North America, then spreading to Europe and destroying more

than two thirds of Europe's vineyards in the late 1800s, phylloxera was first detected in Australia in 1877, in Victoria. South Australia, Western Australia, Tasmania and the Northern Territory have remained free from phylloxera, however many vineyard

operators in these states and territories are still cautious about the risk of phylloxera spread. As there is no treatment or cure for phylloxera infestation, affected vines must be pulled up and replanted to rootstock that is resistant to phylloxera. ▶

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The initial discovery of phylloxera in Australia led to the formation of Vinehealth Australia, an independent statutory authority in South Australia with a single-minded focus on grape and wine biosecurity, principally phylloxera prevention.

“Some people say the absence of phylloxera in South Australia is down to luck. But few argue about the role Vinehealth Australia has played in helping to keep phylloxera and other grapevine threats out of the state,” said Vinehealth Australia CEO Samantha Scarratt.

Although vineyard machinery and other materials shared between regions pose arguably the largest biosecurity risks when it comes to the spread of pests such as phylloxera, Vinehealth Australia have also been vocal about the risk that individuals pose to the transportation of vineyard pests.

“Movement of machinery, equipment, grapes, grape products, propagation material, diagnostic samples and soil, which could potentially transfer phylloxera from one place to another, are tightly controlled between Phylloxera Management Zones in Australia,” explained Scarratt.

“People movement is not controlled, however, so it is up to everyone in the grape and wine supply chain to understand and manage the risks.”

Educating vineyard visitors on the risks

From Noon Winery in South Australia’s McLaren Vale, Drew and Rae Noon are passionately fighting to make sure that phylloxera risk stays front of mind for producers and vineyard visitors in South Australia. Both Drew and Rae have been involved with the McLaren Vale Phylloxera and Biosecurity Working Group and are monitoring the risk of phylloxera spread, from the reclassification of the Mornington Peninsula to raising the awareness of cellar door visitors.

In August last year, the Mornington Peninsula was reclassified by South Australia’s Department of Primary Industries and Regions (PIRSA), taking the region from a Phylloxera Risk Zone (PRZ) to a Phylloxera Exclusion Zone (PEZ).

Given the Mornington Peninsula’s proximity to the Yarra Valley, which is acknowledged as a Phylloxera Infested Zone, this reclassification worried many in the industry.

“Vinehealth’s and PIRSA’s risk appetites and viewpoints on this decision [to recognise the Mornington PEZ] vary but are both valid,” Vinehealth said at the time.

“Vinehealth understands there can never be zero biosecurity risk associated with interstate trade, and that many South Australian wine businesses are reliant in some capacity on direct or indirect interstate trade. Therefore, there is a need to balance maintenance of trade with minimising the risk of a pest introduction to the state.

“Given the risks inherent with serious pests such as phylloxera that are difficult to see and detect, slow to show impact in the vineyard, and are spread by a range of vectors, the best protection for all vineyard owners and industry personnel is to ensure your own biosecurity measures are in place.”

In South Australia, Drew explained that Noon is in a fortunate position when it comes to phylloxera risk, as they are not using contractors or machinery borrowed from other vineyards, meaning their risk is quite low.

“A lot of our pickers, for example, live in Adelaide,” explained Rae. “And they’ll pick in the Adelaide Hills, they’ll pick here. But if you look in Victoria, say, the pickers who might live in Melbourne, might pick in the Yarra Valley and then pick in Mornington Peninsula.”

But this does not mean being lax in precautionary measures. Both Drew and Rae were emphatic about the value of South Australia’s vines, and the importance of protecting them.

“We don’t know how good we’ve got it,” said Rae. She pointed out that if, for example, the vines in France were still predominantly on own roots, this would be something that they would laud over the less-lucky wine regions in the world.

“—There’d be no wine as good as the French wine!” added Drew.

“We will always look back if we get phylloxera, and say ‘Gee, it was bloody good then wasn’t it?’” ▶



The winery/cellar door at Noon is surrounded by their treasured old bush vines. Image courtesy Noon Wines.



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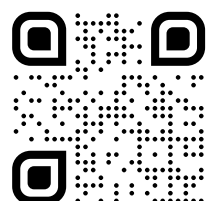
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One of the potential biosecurity risks Noon is exposed to is that of cellar door visitors.

“We’re very conscious of trying to keep people out of the vine rows,” said Drew. “We have [Vinehealth Australia biosecurity] signs on our own place, and we’ve been encouraging others to use public signage.”

“The signs were quite affordable, good quality and are customer friendly for around the cellar door,” said Rae. “Not the KEEP OUT signs that you might want to put on your back blocks!”

“It’s tricky,” she added, “because we have an old vineyard, and our cellar door—when we’re open—is sort of smack in the middle of that vineyard. So if we were to build again, we would build it with more barriers to the vineyard,” said Rae.

“I suppose, if you started with that in mind, it would be a bit easier to design [the cellar door] so that it’s easier to keep them [visitors] out.”

The Noons said that if they were designing the winery and cellar door today, they would take biosecurity into consideration by using attractive

barriers to the vineyards such as hedges or nice fencing.

In lieu of this, when the cellar door is open, the Noons fence off their vines with a rope.

“It’s a hand-knitted rope that our children did when they were at school,” explained Drew. “But we encourage people to use hedges, for example, so ‘natural barriers’, you’d call it. Rosemary grows well around here, so Rosemary hedges or that sort of thing, so that it doesn’t have to be too temporary or overly visible: it can be more subtle than that.”

Cellar door tips from Vinehealth Australia

Cellar doors play an important role in mitigating the spread of vineyard pests and diseases, as many cellar doors have vineyards nearby and often vineyards are unfenced.

Additionally, cellar door and tourism staff are the ‘frontline’ employees who talk to tourists daily.

“Cellar door staff should educate tourists about their role in keeping vines healthy, by not walking or driving into vineyards,” said Vinehealth Australia CEO Sam Scarratt.

“It’s up to cellar doors to provide memorable tourism experiences that don’t involve entering the vineyard and putting the health of vineyards at risk.

“For example, provide designated areas away from vine rows for photography, picnics and games. Use fences and hedges to prevent access to vineyards. Use clear signs to control the flow of visitors around the property, and to indicate which areas must not be accessed.

“And importantly, wineries shouldn’t be using images of people in vine rows on brochures, websites or in their social media, as this gives permission for visitors to enter vineyards.”

Vinehealth Australia has a website section dedicated to Tourism with content for tourists and resources for operators, including fact sheets, posters, signs, biosecurity wording and FAQs.

Vinehealth Australia, with support from the South Australian Government, created the Responsible Visitation Campaign (RVC) in 2017. The first stage of the RVC was consumer research, conducted by Square Holes.

Research found that 44% of female visitors and 28% of male visitors expect to be able to take photos amongst the vines as part of their wine tourism experience.

Consumers indicated that being told not to enter vineyards (by visitor centre staff and cellar door staff) and signage near vines telling them not to enter vineyards would be the most effective.

Research also showed that cellar door staff and visitor information centre staff currently do not include biosecurity messages in their conversations with tourists.

“The RVC research phase highlighted that conversations about the health of vines are generally not occurring with tourists,” said Scarratt.

“While viticulture and winemaking staff generally understand biosecurity risks to vines, tourism staff are not trained in this area. But cellar door and tourism staff are the ‘frontline’ employees who talk to tourists daily.”

In response to this gap, Vinehealth Australia developed the Wine Tourism Biosecurity Program for South Australian cellar door, marketing and tourism staff, which was rolled out between 2018 and 2020.

The key message of the program is: please don’t walk or drive amongst our vines.

The program offered individual site training at cellar doors with high tourist visitation numbers, group training in regions for smaller cellar doors and webinar training for staff who couldn’t attend in person.

“The Wine Tourism Biosecurity Program has educated hundreds of South Australian cellar door staff on how to talk to tourists about biosecurity,” said Scarratt.



As the Noons noted, guests love the look of the vine rows and are eager to get amongst them. Although visitors could be slightly disappointed to learn they couldn’t walk amongst the vines, Drew said that they were always very accepting

when they understood there was a reason for the restriction.

Living within a risk zone

Franco D’Anna is a winemaker at Hoddles Creek Estate in the Upper Yarra

Valley, and a past president of region’s industrybody, where producers have been grappling with phylloxera since 2006.

After the first detection of phylloxera in the Yarra, panic was quick to spread within the community. ▶

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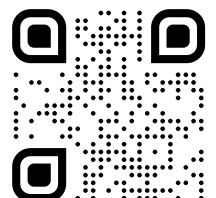
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We're treating it as an opportunity to improve our vineyards, and have clones that are drought tolerant and getting better fruit, rather than thinking of it is at a disadvantage.

Franco D'Anna





Franco D'Anna at the Hoddles Creek Estate vineyard in the Upper Yarra Valley. Image courtesy Hoddles Creek Estate.

“People were jumping up and down,” said D’Anna. But as time went on, D’Anna said people’s trepidation started to lapse, despite the reality that the pest was continuing to spread undetected.

It became important for all vineyards to behave as though phylloxera was present, regardless of how close they were to a known detection of phylloxera.

“We are lucky enough to [now] have pretty much the whole GI declared a phylloxera zone,” he explained. “Whereas beforehand, every time they would find a detection [of phylloxera], they would just increase the boundary by five kilometres.”

Prior to this, D’Anna said that despite there being many outbreaks within the Yarra Valley, producers were not required to undertake precautionary measures when travelling to and from other vineyards unless they were within a five-kilometre radius of a detection.

“It meant that I could take machinery or equipment down to Gippsland without being sterilised, because we were in the PRZ [Phylloxera Risk Zone], same as what Gippsland was, and there was really no restriction.”

D’Anna explained that although at Hoddles Creek there is still no presence of phylloxera as far as they’re aware, they still act as though phylloxera is present. The family has another vineyard in Gippsland, but D’Anna said that all the machinery

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Roughly half of the Hoddles Creek Estate vineyard is now planted to rootstock. Image courtesy Hoddles Creek Estate.

needed for the Gippsland vineyard is kept on-site, to minimise the risk of phylloxera spread.

“You have to presume you’ve got it, because it takes so long to show up,” explained D’Anna. “By that time, if you

haven’t got the precautions in place, you don’t know where you’re spreading it.”

To limit the risk of spreading the pest, D’Anna makes sure that vineyard access is limited to his team, and that footbaths are used consistently. If any

of the workers are visiting a site known to have phylloxera, they will take extra precautions such as changing their clothes and shoes.

Neither the vineyard in Gippsland nor the Hoddles Creek vineyard in the Yarra

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Rae Noon

Valley has a cellar door, however D'Anna explained that they do hold tastings by appointment at the Yarra Valley site once or twice a week.

For a state like South Australia, which is currently phylloxera-free, D'Anna impressed the importance of preparing for the possibility of an outbreak.

"Start planting on rootstock," he said.

"It's a massive problem here, because no one ever thought we'd get phylloxera in the Yarra. So [the] majority of plantings were on own roots. When it did come, we've had to now find that matrix [...] we finally worked out what clones work and what varieties suit the Yarra, but now we're learning about rootstocks, because rootstocks are so different to anything else."

"You have vigorous rootstocks, you have rootstocks that are not very drought tolerant, rootstocks that don't like wet feet. So it's just been a matrix of trying to plant different rootstocks on the property and then deciding what works."

Opportunity for change

"When they first discovered phylloxera [in the Yarra Valley], we started pulling out the blocks that weren't suited here - varieties like Sauvignon Blanc and Cabernet and those varieties and started replanting with Chardonnay on rootstock and Pinot on rootstock."

Hoddles Creek pulled up and replanted six blocks of their vineyard blocks, and now, D'Anna said they have replanted a further 20 hectares Pinot Noir on rootstock, meaning that the vineyard currently has roughly half of its vines planted on rootstock

"The biggest problem is, once you've got it, you've got to pull out, and then you're going from an average vine age of, say, 30-years-old, back down to zero [...]. Growers will then have to wait at least three years to see any fruit from these new vines."

"We didn't want that, so we wanted to make sure that we're sort of ahead of the curve as well." ▶

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Franco D'Anna. Image courtesy Hoddles Creek Estate

In the Yarra Valley, the number of vines affected by phylloxera has driven down supply, which D'Anna said has created the 'perfect storm'.

"All the growers, they've never seen so much return per hectare for fruit, so they're reluctant to pull out vineyards and replant."

This high return is something D'Anna worries is clouding growers' judgements. "[...] They're just getting the money now, rather than looking at the long-term future."

Many of the large wineries in the area have been leading by example, said D'Anna, with companies such as De Bortoli, Chandon and Yering Station pulling out vines and replanting.

"Realistically, the Yarra might shrink by 40% if some of these blocks aren't replanted. And we're already seeing a decline in production [...] so who knows, in 10 or 15 years, what vineyards will be left."

"We're sort of treating it as an opportunity to improve our vineyards, and have clones that are drought tolerant and, and getting better fruit, rather than thinking of it is at a disadvantage."

"When we first had phylloxera discovered, I think 86% of the vineyards planted here were on own roots." D'Anna estimated that the economic cost to the Yarra to replant the entire region to rootstock would be over \$1 billion.

"It obviously is a big cost to plant on rootstock, but you know, you've got to look at the long-term viability, not short term."

D'Anna acknowledged that the Yarra has done well to keep the spread within the region. "But it's all the stuff you actually don't know about that's happening, that's where the problems lie," he said.



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