



WORDS CLIVE HARTLEY

SURVIVING INTO OLD AGE

OUR oldest vineyards date back to the 1860s and they are deservedly regarded as national treasures. But just like tending to the needs of our old-age pensioners it can be a challenge to keep these vineyards ticking over.

But at what age does a vine become an old vine? There is no agreement on this. In France the term *vieilles vignes* is used on labels but there is no EU control on the name. In 2009 the Barossa Valley established its Barossa Old Vine Charter to enable old vineyards in the region to be registered. This classification starts at 35 years of age with the Barossa Old Vine category. Next is the Barossa Survivor Vine for vines 70 or above. The Survivor term is used to indicate vines that dodged the bullet of the 1987 South Australian vine pull scheme where the government paid growers to pull up unwanted old vines due to a grape glut and uneconomical prices. Next comes the Barossa Centenarian Vines which are 100 years old and over. Finally, the Barossa Ancestor Vines are over 125 years old and are some of the oldest vines in the world.

Phylloxera, the microscopic aphid that destroyed practically all of Europe's vineyards in the late 19th Century, didn't get into South Australia which is why we now have our old vines. In Europe only pockets of vineyards planted on sandy soils survived. One of the most well documented vineyards can be found in Champagne and owned by Bollinger. Other remote locations such as the Greek island of Santorini, with its rare volcanic ash soils, was another environment where Phylloxera didn't survive, and while their baskets pruning system (Kouloura) gets renewed every 20 or so years some of the roots of the vines can be up to 300 years old.

Renowned viticulturist Prue Henschke is the custodian of some of Australia's most treasured old shiraz vines at the Hill of Grace Vineyard in the Eden Valley. She considers the fungal disease *eutypa* as the biggest challenge in tending her old vines. *Eutypa* is one of the grapevine trunk diseases (GTD) of which there are a number. It is a global problem for the wine industry and the French Wine Institute puts the cost at \$A1.5 billion a year in lost production due to declining yields or

costs in replanting. *Eutypa* problems increase as the vine grows older and is a sleeper disease with it only being detected after several years once it is present. It is one, if not the major, disease affecting Australian vineyards. *Eutypa* spores sit in infected wood and can be spread by wind and rain. The spores then enter through fresh pruning wounds. The fungal infection can cause dieback in cordons or the arms of the vine as well as poor fruit set and uneven ripening. The vine will eventually die. "Good pruning skills are of utmost importance to keep the sap wood healthy without large wounds," says Henschke. She goes on to stress that it is always better to cane prune rather than spur prune old vines. "The pruners can take new wood each year and form a new crown away from the *eutypa*-infected section," she adds.

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Not all vineyards should or can be nurtured into old age. If there are better clones available then it might be worth replanting the vineyard. Also, if the productivity levels fall then a decision needs to be made if it is more economical to replant. It is reported that Wynns in Coonawarra has replanted 25 per cent of its vines over the past 10 years. Wynns found that in general its 40 to 50-year-old vines were experiencing health decline.

You obviously do lose vines to old age and the Henschkes have a long-term replanting program to ensure the future of these great sites. "We have carried out a mass selection program to select cuttings from the best performing vines, grow them for 30 years and select the best performers from the nursery. The cuttings from these are then used to replace vines that have died," Henschke

explains. They also use the layering process which Henschke finds works well on dry-grown vineyards. This is where a long cane is trained down to the ground and buried with the end bent up at the point of where there is a missing vine. Over time this cane develops its own root system and when it is strong enough the cane is severed from the "mother" vine and a new vine is established. It is a traditional way of replacing vines in Europe and still used in some areas such as Santorini.

It is hard, neigh on impossible, to say that old vines make better wines as there are too many variables that come into play. Often old vines are ungrafted, of dubious clones and dry grown whereas younger vines are clonally selected, grafted and designed specifically for the site. Balance between leaves and fruit is important. It is interesting to note that some great wines are produced from really young vines such as their first crop at three years old. This might be due to their lack of established canopy and better fruit exposure. When the vine gets into old age, say at 35-50 years old, they might get less vigorous and again come into balance with less active canopy and again better fruit exposure. However, Henschke stresses, "there is no reason for the vines to lose their vigour unless the pruning or reworking (to a new trellis, for example) has led to *Eutypa* infections from large cuts and poor technique." The skill of the viticulturist could be a determining factor in the management of vines with increasing age and for many years we have been saying that the next step-up in wine quality is going to be achieved not in the winery but the vineyard.

But Henschke tells me we might be getting a bit closer to a scientific answer on the question of whether old vines influence wine quality. A research project looking at "The Effect of Grapevine Age on Vine Performance, Grape and Wine Composition, Sensory Evaluation and Epigenetic Characterisation," by the University of Adelaide, and funded by the Barons of the Barossa, will hopefully be published soon and dispel some myths and shed more light on the topic.