

# TURNING UP THE HEAT ON CLIMATE CHANGE

There is no doubt that global warming presents the greatest challenge the wine industry has had to face since the devastating Phylloxera epidemic. Yet the wine industry is beginning to join forces to confront climate change, as a Protocol developed in the New World demonstrates, finds Felicity Carter.

The Australian viticulturalist Dr Richard Smart doesn't pull any punches. "You know what's missing from this conference?" he asked during a coffee break. Dr Smart had just delivered a startling speech at the Climate Change and Wine conference in Barcelona in February. In that talk - which had many audience members leaning forward, frowning, as they tried to decipher his thick Australian accent - Dr Smart outlined the threats posed by global warming. The speech was widely reported, not least because of his suggestion that rising temperatures could mean that Bordeaux's best vintages were now behind it. With more than 300 delegates attending the conference, including reporters from major media, there could be no doubt that the wine industry takes global warming very, very seriously. Yet Dr Smart thinks the global wine industry needs to go further. "What we need is an action plan," he said. "Otherwise it's all just talk."

It's clear the problems created by climate change are all big ones: there's the impact on the vineyard, water scarcity, and carbon footprints to consider. But New World producers have taken a small first step to grappling with the new reality, by developing a Greenhouse Gas (GHG) Protocol.

## *The scale of the problem*

All too often, discussion of climate change can verge on the apocalyptic, with a focus on what might happen at some time in the future. But what the Barcelona conference demonstrated clearly is that the impacts of climate change are being felt right now. For some wine makers, this

has been good news. Dr Ernst Loosen, Riesling maker from Germany's Mosel Valley, said there was a time when he only saw three good vintages in a decade. "Now, thank God, we ripen every vintage."



»» It became clear that if we pooled our resources, not only would the project be more cost effective, but we could develop a tool that would have international credibility. ««

*Allison Jordan, executive director, California Sustainable Winegrowing Alliance, discussing the GHG Protocol and Calculator*

Yet this ripeness has come at a cost, as the wine style for which the area is famous is vanishing. "Now we see over-ripe vintages," he said. "We have had people showing wines with 15% alcohol. I hate them. I want to keep these light, delicate wines."

If the experts are to be believed, centuries of carefully-built up knowledge about some of the world's most famous

wine styles will soon be obsolete as changing weather impacts on growing conditions. "Wines will become more alcoholic. Some red wines may lose colour. Some will lose varietal character," said Dr Smart. That's on top of a drop in acidity and a loss of aroma - with worse to come.

"All the models are showing drought in South America, the Mediterranean and Australia," said Bernard Seguin of the INRA, France's agricultural research body. "Many things will become difficult - catastrophic, possibly - if we do not prevent warming."

Land available for viticulture in Australia and California will shrink; Pinot Noir will no longer flourish in Burgundy; parasites will move into new areas; plant cycles will shorten and the risk of frost will be higher.

## *Developing a Protocol*

Growing public awareness of the issue has created other burdens. Since 2005, producers have faced pressure from regulators and retailers, to account both for their environmental friendliness and their greenhouse gas emissions. For New Zealand, the British discussion of 'food miles' raised the alarm. Fearing that a new barrier to market was emerging, studies were done at Lincoln University to determine New Zealand's agricultural footprint. It turned out New Zealanders were so efficient the energy used to produce lamb in Britain was four times higher than in NZ, even when shipping was accounted for.

Large Californian wineries also found themselves grappling with reporting issues, thanks to leadership shown by Governor Arnold Schwarzenegger. In

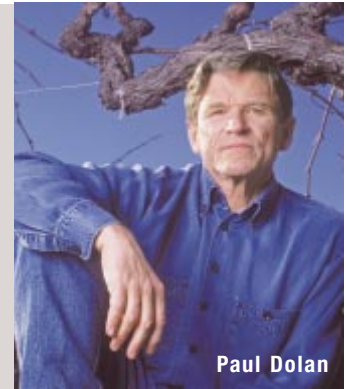
mid-2006 he introduced a world-first bill, the AB 32, which requires the California Air Resources Board to develop regulations and market mechanisms to reduce carbon levels to 1990 levels by 2020.

“Although the wine industry and most other agricultural industries are considered low producers of carbon emissions, GHG issues are becoming more significant to brands and image,” said Allison Jordan, who is both the communications programs manager for the Wine Institute of California and executive director of the California Sustainable Winegrowing Alliance.

Similarly, Stephen Strachan, the CEO of the Winemakers’ Federation of Australia, says that from 2005 his organisation became aware of research done in the UK to compare the carbon footprints of wine producers in different countries. Unfortunately for the Australians, “the GHG emissions voluntarily reported by the Australian industry were found to be ten times greater than those reported by the Californian industry.” The reason, said Strachan, is not because “there were any major differences in wine production methods, but simply because different inclusions and methods of calculation were being used when assessing the carbon footprints.”

This all fed the dawning realisation that the wine industry urgently needed a way to calculate GHG emissions. So when the Wine Institute of California declared that it was time something was done, they found a willing audience. “The goal of the project was to provide a free, easy-to-use, wine-industry specific GHG protocol and calculator,” said Jordan. She said it became clear that pooling resources could create a cost-effective tool that would have credibility with regulatory bodies, retailers and consumers. Negotiations focused on such issues as where to draw the line around the production process, and where to get the best emissions data from – and the Greenhouse Gas Accounting Protocol for the International Wine Industry and related Greenhouse Gas Calculator was born. A joint initiative between the Wine Institute of California, the New Zealand Winegrowers Association, South Africa’s Integrat-

Individual wine companies across the world are working to minimise their impact on the environment and to go carbon neutral. One such is Parducci, the oldest winery in Mendocino County. The winery became a certified organic producer in 2003 and a certified biodynamic producer in 2005. Using the California Climate Action Registry Protocol, Parducci calculates its emissions and mitigates them by: the use of solar and wind energy; the conversion of company vehicles and farm equipment to biodiesel; earth-friendly packaging and on-site vineyard composting, water conservation and recycling. Part owner Paul Dolan has played an even bigger role in reducing emissions. He says that around ten years ago he brought a number of California’s wine leaders together in the hope that they would become leaders in sustainable farming. “We took on this process of writing a sustainable wine growing code that’s a self assessment guide,” he says, adding that wineries producing a total of 150m gallons of wine have now gone through the process. Dolan says he is now working with other agricultural groups to transform the way California’s industries operate, including bringing farmers together to help limit chemical use and restore waterways. But Dolan, who used to consult to the Clinton government on environmental issues, says lobbying Washington is the most frustrating thing he does, because of political resistance at a federal level. For that reason, he believes the wine industry has to raise the bar on sustainability as high as possible, to demonstrate that it works.



Paul Dolan

ed Production of Wine program and the Winemakers Federation of Australia, the Protocol sets out “emission sources to be included in carbon footprint calculations,” according to Provisor, the company that created the tool. “It also lists data sources and standards used in developing the tool, and provides sufficient detail to enable the methodology to be independently peer reviewed by groups such as the World Resources Institute, which administers the International Greenhouse Gas Protocol.”

Today, the tool is freely available online. “The most important thing to remember is that the crux of the whole project is really the Protocol, not the calculator,” says Strachan. “A producer can use any carbon footprint calculation method they like, provided that it is shown to be in line with the GHG Accounting Protocol for the International Wine Industry.”

### *The canary in the coal mine*

Realistically, no matter how pro-active the wine industry is, it won’t be enough to reduce global warming in any major way. For that, the kind of government

leadership shown by California is required. But perhaps, given how vulnerable viticulture is to climate change, it may be time for the wine industry to pressure governments to make the necessary legislative changes.

The wine industry is unique: it’s a high export earner; it’s inextricably linked with history and culture in many wine producing nations; and it openly and willingly shares people, resources and information at an international level. This theoretically means it has a lot of clout. And individual countries could take leadership roles on specific topics: Australia, for example, which probably knows more about the management of drought and water than any other country, has a lot to teach. Unfortunately, as Strachan admits “the Australian industry has not yet formally taken on an international leadership role in this area”. Perhaps it’s something to think about, if only because – as Dr Smart said at the conference – viticulture is “the canary in the coal mine of agriculture”. The changes now being observed in the vineyard are simply “an early warning signal of what is to come”. ■