

Letters

A contributor replies

I feel compelled to respond to the letter from Michael Brajkovich MW in issue 4 of *The World of Fine Wine*. Although I commend the noble cause of screwcap users in their attempt to eliminate TCA taint from their wines, I still can't condone their failure to live up to stated promises that screwcaps would eliminate bottle variation, not suffer reduction problems and guarantee the perfect bottle-maturation environment.

There is clearly a lot at stake in the discussion stimulated by my previous article on closures (see *Fine Wine* 2). New Zealand has put 70 per cent of its wine under screwcap, trusting not only that Michael Brajkovich's scientific theories are correct but also that screwcaps will give them a marketing edge over other countries' wines. If correct, it could prove a brilliant coup for that nation's exports; if not, they could be in serious trouble. Secondary to this, producers have reaped up to a \$1-per-bottle windfall by putting their wines under screwcap rather than cork – a cost saving that won't be given up easily. One producer creamed off half a million bucks alone. For these and other reasons, it is difficult for the most committed screwcap users to own up to any problems. Make no bones about it, Michael Brajkovich's letter is part of a concerted effort to defend a marketing initiative with a strong economic interest at stake.

It also seems that some of Brajkovich's 'chemistry' is back to front, as in fundamentally wrong. Concerning the development of sulphur-like odours, he states: 'if a wine has residual hydrogen sulphide at bottling, there is a danger of it being reduced to ethyl mercaptan or other such "reduced" compounds as it ages in a reducing environment', like screwcaps. Dr Alan Limmer (a winemaker with a PhD in chemistry) tells me that 'H₂S is oxidised (not reduced) to mercaptan, and mercaptans in turn are oxidised to disulphides – Chemistry 101', and that this 'understanding of the basic sulphide chemistry is critical to understanding the post-bottling chemistry', which can cause reduced sulphide-related problems. The difficulty is that many screwcap users are depending on Michael's chemistry to solve their bottling problems.

Brajkovich also makes a seriously misleading attempt to associate the explanation of aroma and flavour 'scalping' in the Australian Wine Research Institute's *Technical Review* 144 with cork's demonstrated ability to avoid reduced characters. Brajkovich says: 'Secondly, corks and synthetic closures have been shown to be able to "scalp" certain aromas and flavours from the wine where screwcaps do not (AWRI *Technical Review* No 144). These two factors make corks and synthetics much more forgiving of residual hydrogen sulphide, and reduced compounds may not form or may not be retained.'

Although AWRI TR 144 talks of various compounds being 'scalped' (absorbed) – including corks taking TCA out of tainted wine – there is no mention, stated or implied, of sulphide characters being scalped out as

Brajkovich suggests. The association simply doesn't exist in this document. This is Brajkovich's own extrapolation of the results, carefully draped next to an AWRI study to lend it authority. AWRI had previously reported the high incidents of sulphur-like odours under screwcaps in TR 142 and was well aware of this matter at the time of writing TR 144, but still it made no suggestion that this was a possible mechanism.

The possibility of corks scalping out reduced characters is disproved by AWRI's Peter Godden's presentation at the New Zealand Screwcap Symposium in November 2004, which Brajkovich chaired. This compared a wine bottled under an hermetically sealed glass ampoule (absolutely anaerobic), which showed high levels of reduced characters; screwcap (near to absolutely anaerobic), which showed less; and cork, which allowed oxygen ingress and showed little/no reduced characters. If the reduced characters were 'scalped' by the cork, this would mean

Screwcaps will cause reduced characters in wines. At least two cork-based enclosures have either equalled or beaten screwcaps in terms of aromatics, oxidation, zero TCA and bottle variation

more or less equal levels of reduction in the ampoule and under screwcap. The observed gradation of reduction is clearly linked to the gradations of oxygen ingress, supporting the theory that there is no connection between scalping and reduction. The same presentation also showed a clear correlation between high levels of retained SO₂ and high levels of reduction. The sample under cork had low levels of both. This clearly has nothing to do with scalping and everything to do with oxygen ingress – or lack thereof. All of that transforms the scalping theory into nothing more than a dead-end excuse.

The more obvious solution to Brajkovich's quoted second sentence above should consider how the oxygen ingress associated with corks and synthetics staves off, rather than absorbs reductive characters. He has also, unintentionally, acknowledged that residual sulphides 'may not be retained' under these other enclosures, whereas they would be locked into the wine forever under screwcap. Here he admits that corks showing reduced characters can clean themselves up, once in bottle, whereas screwcaps can't. All of which seems positive to me.

Brajkovich 'has yet to see [] a problematic "reductive" wine', and yet he then goes on to say: 'Recent AWRI research clearly shows the superiority of screwcap closures

over all of the other closures tested in all aspects of wine quality, with only the proviso about reduced characters.' Although this is unspecified, from what I have seen, *all* the AWRI trials so far have shown that wines bottled under screwcaps had significant problems with reduced matchstick-like characters. These did not occur in significant numbers under any other closure.

The fundamental problem with screwcaps is that they will cause reduced characters in wines: that's their Achilles heel. Brajkovich's statement that the 'superiority of screwcaps' has been shown clearly in all other aspects of wine quality – beyond the reductivity already noted by AWRI – is not true. The facts are that at least two cork-based enclosures – Sabate's Diamond and Pro-cork – have either equalled or beaten screwcaps in terms of aromatics, oxidation, zero TCA and bottle variation. Since they also lack screwcaps' reductive tendency, overall they would seem to outperform screwcaps. Ironically, Sabate's prototype had ultra-low permeability, similar to that of screwcaps, and was abandoned as a failure because of reduction concerns. Their two commercial models are designed for permeability that is more cork-like.

Although Brajkovich may not be finding sulphide-driven reduction problems with screwcaps, others increasingly are. Tim Atkin MW, writing in the UK's *Off-Licence News* (26 November 2004) put reduction levels in a pre-release tasting of New Zealand whites at about 20 per cent. Around the same time, the head judge at the last Air New Zealand awards criticised producers for far too many sulphide problems found in wines bottled under screwcap. This is all the more significant coming from Brent Marris, a staunch early supporter of the New Zealand Screwcap Initiative (NZSCI). I also know that one of my favourite Syrah producers, a central figure in the NZSCI, has moved his Syrahs back under cork and that my favourite Chardonnay producer, also a key figure in NZSCI, is now actively experimenting with Diamond CO₂ washed corks. If there are no problems, as Brajkovich suggests, these would be the last people to look at alternatives to screwcap.

Sadly, I've stopped buying dozens of New Zealand wines that I used to lay down for a few years, simply because of the risks involved with screwcaps. On reflection, perhaps it's better to go with the devils and angels we've known in the past than to run the risk of mistaking Antichrist for God.

Screwcaps may prove to be an important closure in the future, but the users have to face up to the reality of the current issues and start dealing with them more honestly. My prediction is that screwcap users will quietly move to permeable foil over the course of the next few years, while hoping that all the wines bottled over the previous four years are drunk before reduction takes its full toll.

Paul White

Wellington, New Zealand

The chemistry's all wrong

I refer to the well-written and technically detailed letter from Michael Brajkovich MW regarding screwcaps. He addresses the problem that screwcaps appear to encourage the appearance of sulphide taint in some wines and offers a technical explanation for

this being, in reality, a simple winemaking problem. The nub of the explanation is that the wine has been bottled with residual hydrogen sulphide, and this can be 'reduced' (in the reductive environment of the bottled wine) to the unpleasant ethyl mercaptan etc as the wine ages. We are talking quite basic chemistry here, and unfortunately Michael has got it wrong. The conversion of hydrogen sulphide to ethyl mercaptan is an oxidative process and is therefore unable to take place in the bottled-wine situation. The unfortunate corollary to this is that his suggestion as to how winemakers can avoid this problem – that is, treat the wine with copper to remove the hydrogen sulphide – will not work.

The role of air in the maturation of wine under corks is also discussed in some detail. The conclusion is that 'good corks seal wines completely from air and that oxygen is not involved in the maturation process. For years, I have laboured under the impression that half-bottles mature wines faster than 75cl bottles, which in turn mature wine faster than magnums, and that the larger-format bottles offer even slower development. Do I take it that this is a myth and that they all mature at the same speed?

As an ex-scientist, I prefer to see arguments justified with facts rather than complicated scientific theories. I have no doubt that screwcaps will find their niche in the wine industry. However, it will be alongside, rather than instead of corks, and the wines for which they are used will be chosen after taking into account both the weaknesses and the strengths that this alternative closure offers – when we know them better.

Neil McCallum MSc (Auck), DPhil (Oxon)
Dry River Wines, Martinborough, New Zealand

Live and let live

As a long-time merchant/retailer (having spent 20 years at the fine-wine-selling coalface – and with some such experience many industry commentators would gain a more balanced view of the beloved consumer), I would like to make one point in the Cobb/Croser debate (see *Letters, Fine Wine 3*). Cobb and Croser's 'UK consumers [who] are too lazy and uninformed to explore the more intriguing and satisfying [wine] alternatives for themselves' are not necessarily lazy at all. The fact is that most buyers of cheaper/quaffing wines are simply not interested enough in wine to bother. They have other preferred interests in life, be they quilting, astronomy, racing pigeons or gardening. Wine is just a drink to them – a medium of social alcoholic consumption that lubricates their jaws or minds while they are pursuing their own personal passion. They just aren't interested enough in wine to want to know more than what is good for three or four quid. And they should not be derided. They also enjoy wine – it just isn't their preoccupation.

There are different segments to the wine market with different interests. Not all wine drinkers are interested in the effect of the heat in the 2003 growing season on the delicacy of Mosel Kabinett. And why should they be? It's just not their thing! But we, of course, are obsessed with it.

John Baker
Sydney, Australia