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# Cutting remarks

## Tom Stevenson



How many people realize that the discs (*rondelles* in French), or “mirrors,” on a traditional sparkling-wine agglomerate cork have been cut from the bark at the wrong angle—one that is perpendicular to how classic still-wine corks are cut? Not many, it would seem. Whenever I ask about this, all I get are blank looks. Nobody seems to have noticed, let alone thought about the implications, but as far as sparkling wine is concerned, it is a major flaw and one that renders all research about the variation of O<sub>2</sub> ingress and TCA egress null and void.

The shaft of a regular cork is cut parallel to the bark to ensure the lenticels are kept horizontal to the width of the cork, not its length. This is important, because the very purpose of lenticular channels is to permit an ingress of O<sub>2</sub> through the cork bark to the tree's interior, while simultaneously allowing an egress of CO<sub>2</sub>. With lenticels horizontal to the width, a regular still-wine cork is almost completely impermeable; but cut a cork the wrong way, and the lenticular airways form a

network running from one end of a cork to the other, almost guaranteeing its permeability. We do not know how much O<sub>2</sub> enters a bottle of wine through corks that have been cut perpendicular to the bark, because none of the papers assessing the volume (approximately 0.0005cc per 24 hours) and variability (300x) of oxygen ingress have studied such corks, yet this is precisely how sparkling-wine discs are cut.

Looking at the number and direction of lenticels on a sparkling-wine disc, it does not take much imagination to realize that they probably leak like a sieve. It is not just the lenticels that can clearly be seen on the side of a disc that are the problem. All the pin-prick holes that pepper even the most beautiful-looking, highest-quality discs are the ends of lenticels, and because the disc is so thin, most will probably traverse its entire thickness.

The more lenticels there are, the shorter the life of the disc. When opening a bottle of sparkling wine, the wetter and more pinched the disc is, the less effective as a closure it has become. When the first

disc on a 2+1 closure is visibly wet, only one disc is left to protect the wine from the agglomerated cork. When the second disc goes, the wine has direct access to the agglomerate—a bit like a car running on its rims; it works, but it is not advisable. (Otherwise why go to the expense of adding discs in the first place?)

This would not happen if the discs were cut at the correct angle, of course, and from the photo (*bottom, right*) of an extremely rare precursor to the agglomerate cork, the very first discs were cut at the correct angle. How did that happen, and why did it change?

Champagne used to be sealed with solid natural cork, but the proportion of the cork crop that was suitable was extremely limited because the cork bark that was required to cut a Champagne cork (31mm [1.2in]) had to be 30 percent thicker than a normal still wine cork (24mm [0.9in]). As Champagne production increased, the sourcing of this thicker, higher-quality cork bark was fast becoming unsustainable, so an alternative was sought.

Initially, this was achieved by cutting the corks shorter from narrower, more abundant cork bark, and adding discs pressed from even more plentiful offcuts. As the photo illustrates, when discs were first produced, they were cut correctly (parallel to the bark, not at a right angle) and glued onto solid, not agglomerated, cork. Eventually, however, the sourcing of appropriate cork bark became so difficult that the main shaft was replaced with agglomerated cork and, for economy, the discs were stamped perpendicular to the bark, rendering this closure fatally flawed.

This is the unspoken truth about agglomerate corks. ■



Left: Classic still-wine corks cut parallel to the bark. Right (top): Traditional sparkling-wine 2+1 agglomerate cork; (bottom) an extremely rare solid 2+1 Champagne cork with discs cut parallel to the bark. (It might look like three discs, but the paraffin waxing slipped, hence it was not used and survived.)