Sparkling wine closures and purchaser perception of local, national and international sparkling wines

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In this talk I will address two topics. The first is that of sparkling wine closures; the second, marketing issues relevant to the sparkling wine scene in Ontario.

Closures

The requirements for the ideal closure for sparkling wines are similar to those for still wines, with a few extra considerations.

- It must provide a taint-free seal.
- It must prevent loss of pressure: traditional method sparkling wines are usually bottled with around 6 bars of pressure from the dissolved CO₂.
- It must provide the appropriate oxygen transmission level (OTR).
- It must have widespread consumer acceptance (packaging is a technical issue, but it’s also very much a marketing one too).
- It must have consistent physical properties.
- It must be affordable.
- And it must be easy to open and reseal.

The traditional sparkling wine cork is constructed from agglomerate cork, with one or two discs of natural cork at the wine-contact end. It has a wider diameter than a still wine cork, which results in extra compression, in order for the cork to do a better job at maintaining pressure. The market for sparkling wine closures is around 1.5 billion annually and the vast majority of sparkling wines are sealed this way (the main alternative in terms of sales is Mytik by DIAM, which is currently around 60 million, but growing – in Champagne, where it is gaining traction, it now seals roughly one in six bottles).

Despite the ubiquity of the standard sparkling wine cork, it doesn’t do a terribly good job in meeting the requirements for the ideal closure. Of the seven counts, it fails on three.

(1) Musty taint caused by cork-borne contaminants is still a problem, with quoted taint rates ranging from 2–7% (although none of these have been validated: where data exist they are from sensory analysis only, so there are likely some false positives). There is some reason to believe that champagne corks could have slightly lower taint rates than natural still wine corks, however. This is because the cork discs in contact with the wine are usually cleaned by a steam-based process, thus removing some of the contaminating haloanisoles, if present. To punch a natural cork of top grade quality is expensive; to produce top grade discs is cheaper. However, taint is more of a problem for Champagne, because CO₂ volatilizes the taint compounds: TCA aroma threshold in wine of 2–5 ng/l in still wines, reduced to 1–1.5 ng/l in sparkling wine. Which ever way you look at it, cork taint is still a significant problem.
Consistency is still a problem for sparkling wine corks, even though it is less of a problem than it is for natural corks used in still wines. The nature of the cork (agglomerate with discs) should result in a relatively uniform product. But differences in pressure retention are still an issue, as is ‘pegging’.

The final issue is one shared by most sparkling wine closures: they are not very user friendly. The combination of cork, muzelet (wire) and cap is complicated and potentially perilous to remove, and sparkling wine corks can’t be reinserted.

But this combination seems to be required in the EU requirements for sparkling wines:

**Sparkling wines and aerated sparkling wines must be presented in glass bottles which are closed with:**

- a mushroom-shaped stopper made of cork or other material permitted to come into contact with foodstuffs, fitted by a fastening, covered, if necessary, by a cap and sheathed in foil completely covering the stopper and all or part of the neck of the bottle.

This creates problems in terms of how far alternatives can be explored. If you go by the letter of the law, alternatives such as Zork, crown caps and screwcaps are not allowed for fizzy wines produced or sold in the EU!

Now let’s consider the various alternatives to the traditional sparkling wine cork.

**Mytik**

The first and most important is DIAM’s Mytik. This is the same material as the DIAM still wine cork, and is a microagglomerate consisting of cork flour and synthetic microspheres, bound together with a food-grade PVA glue. The cork component is cleaned before use by means of critical point CO$_2$, which has very good penetration and extracting power. It is a consistent, taint-free closure. It costs just a little more than a standard Champagne cork, and has proved very successful. Mytic keeps pressure well (0.7–1.3 cc gas per day versus 0.5–2.5 for standard corks) and has a slightly lower oxygen transmission rate (this results in a slower development in bottle, although Mytik now have a new, higher OTR product called ‘access’).

**Zork**

Zork SPK is an innovative closure. Unlike existing closures for sparkling wines, it is re-sealable. It takes a while to get used to opening and resealing it, but it looks a bit like a Champagne cork when covered with a foil, so consumer acceptance at point of purchase not likely to be a big issue. It can also be used without a foil to make a powerful futuristic brand statement. Technically, OTR and gas retention are fine for short/medium term ageing of the sort that most commercial sparkling wines experience.

It is already being used in Canada by Rocky Creek winery in BC. Sileni (NZ) and Yellowtail (Aus) use Zork for wines imported into Canada.

**Screwcaps**

Guala’s Viiva, launched in 2002, is the first screwcap suitable for full-pressure sparkling wines. Advantages: ease of use, resealable. Disadvantages: looks odd to see a screwcap on a sparkling wine bottle, so there is possibility for category confusion, and it has a slightly low-rent image in the eyes of some consumers. Australian producer Be Bortoli (Willowglen) is currently using it.
Crown caps

Used widely for cellar ageing pre disgorgement (see below), these have also been used for some sparkling wine brands. OTR depends on the liner (again, see below), but they are taint free and easy to use – most people are familiar with them from other drinks such as beer and cider. And they are consistent, too. The issue is market acceptance and image: they look cheap to some people. Domaine Chandon (Australia) used them for a while in the domestic market, but they haven’t been a success.

Cellar ageing on lees, pre disgorgement

In the past this was done on cork. Then from the 1960s crown caps were introduced, with liners made from cork. It took people 20 years to realize that crown caps were allowing more OTR, plus there was variation, plus there was cork taint.

Crown caps are still used, but now come with a range of different liners. The OTR of the liner is now seen as a winemaking tool in the process of ageing on lees. The OTR is sometimes referred to in this context as ‘osmotic exchange’ and is cited in cm³ per 24 h.

As an example, PE.DI offer three crown cap liners:

- PO expanded polyethylene disc – for ageing of 18–24 months 0.6 cm³/24 h
- PI injected polyethylene granulate – for ageing 18–36 months 0.25 cm³/24 h
- PO-S Expanded PO disc with saranex film on either side as an oxygen barrier – recommended for ageing 3–4 years 0.14 cm³/24 h

Lower OTR preserves freshness and allows for longer lees ageing, which can increase richness and complexity, avoiding the development of oxidative characters. Time on lees doesn’t just increase complexity, it also builds up ageing potential.

Since 1993 Moët has been reverting to natural cork for lees ageing for a small batch of the vintage. Other Champagne producers, most notably Bollinger, also use corks.

Marketing issues

The UK example is worth considering, as it may have some lessons for Ontario. Over the last decade there has been a surge of interest in English sparkling wine. Demand has outstripped supply, and the wines have sold at a premium price. This success has been quality driven: the climate and soils have produced grapes that are capable of making compelling fizz. But yields are quite low (cool temperatures during flowering), although this problem is offset by relatively low land prices.

Lots of new vines have gone into the ground. A key challenge will be for producers to adapt to changing distribution channels as the volumes increase. The simple model of direct sales with high profitability has worked well. With higher volumes, distribution – and maintaining profitability in the face of one or two margins – becomes a key issue.

Balancing the demand–supply equation is critical. High prices are maintained by strong demand. If this demand weakens in the face of larger production, then the vicious circle of price softening, erosion of profitability, production side cost-cutting, and lower quality could be set in motion. Champagne has shown clearly that lowering prices reduces desirability.
As production increases, marketing spend needs to increase too. The Champagne region spends a lot on marketing. English sparkling wines are well known among wine lovers in the UK, but hardly known at all by normal people. Effective – and in many cases costly – marketing is needed to reach non-involved consumers. At the moment, the wines sell themselves, but this can’t be guaranteed. Some thought and planning needs to go into prompting higher demand to coincide with the volume increases in the pipeline.

Domestic sales versus export? The UK sparkling wine scene is growing to the point where export initiatives have begun. For example, English Wine Producers had a stand at ProWein. Different approaches are needed for domestic and export marketing strategies. For UK sparkling wine, the story is a strong one: a country you wouldn’t associate with wine, but with the ideal soils and climate to make very high quality sparkling wines that are the qualitative equals of Champagne – especially aided by a little bit of global warming.

Currently, Canadian wine of all kinds isn’t on the map in potential export markets. Canadian wine still has a novelty value. (For this reason, it is important that peoples’ first experience is a good one.) Canada also has a chance to choose the reputation and the styles that it wants to lead with – will sparkling wine be in the mix? How will it be presented? In the UK, sparkling wine dominates – the still wines are getting much less attention. For Canada, still wines are very strong.

The use of social media for engaging with customers, retailers and journalists is proving very interesting. It gives producers a chance to tell their story, to spread the message, and to connect with people without having to go through gatekeepers.

What sort of style should Canadian sparkling wine producers be aiming at? The massive success of Prosecco shows that there is a place for fruity, tasty wines that aren’t trying to be Champagne. Compare this with the relative struggle of Cava, all of which is traditional method.

The non-vintage (NV) model. 90% of the production of Champagne is NV: it is the priority. ‘Champagne is based on consistency of quality, consistency in volume and consistency of price.’ (Benoit Gouez, Moët et Chandon.) In the UK, practically all sparkling wines are single vintage. And they are released very young. Could NV be a better model for sparkling wine, making use of blending and reserve wines to create a consistent style, and offsetting problems with vintage quality and volume variation? This requires long-term vision.

Do English or Canadian sparkling wines need a special name? This has been discussed a great deal. Now, I would say ‘no’: sparkling wine is no longer a derogatory term. It has achieved respectability, and there’s no need to go through the pain of devising a new name that will prove acceptable to all stakeholders.

Finally, some good news. It seems that the shadow effect of Champagne is weakening. The market for non-Champagne sparkling wines is growing, and it’s an exciting time to be involved.