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## **Corks Versus Screwcaps: A Literary Review**

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**Corks Versus Screwcaps: A Literary Review**

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### **Abstract**

This literature review goes over the current consumer perceptions of wine and their closing methods. Screwcaps and natural corks are compared in customer preferences and how they are influenced in their purchasing decisions just by appearance. Benefits and limitations to both closure methods are compared using historical research, scientific experiments, and studies with surveys in a qualitative manner. Future research on the topic will be decided after the information is gathered and deciphered.

## **Introduction**

It's been an ongoing debate between wine enthusiasts since 1969: corks, or screw caps? Corks have been used for thousands of years all over the world. As for wine, the main purpose of the cork was to protect the bottled wine from turning into vinegar, which happens when oxygen makes its way into it. Since corking has been a historical tradition for wine since the 1500s, it makes sense why most wine lovers are stuck in their ways and refuse to trust anything else. For ages, these same people have given screwcaps the reputation of representing *low-quality wine*. However, recent research has given reason to not judge a book by its cover (or, in this case, a wine by its stopper). The purpose of this literature review is to debunk the negative myths about screw caps and other alternative wine closure methods and provide some surprising facts about how it can actually improve wine. It will also go into the science behind what happens when a wine is protected by both a cork and a screw cap, ultimately comparing the two in several ways.

This literature review is targeted towards both consumers and those who work in the food and beverage industry, so that they can better make the decision of which wines to purchase for their own consumption or to carry in their restaurant. Interviews and surveys given by wine enthusiasts will be summarized and opinions will be shared prior to stating the hard truth about the two.

## **Literature Review**

The purpose of this literature review is to weight the benefits and disadvantages of natural corks and screwcaps in their ability to preserve and positively enhance a bottle of wine.

## **History of the Cork and Screwcap**

Natural corks are made of bark that is stripped from cork oak trees, which are mainly found in Mediterranean countries (Reynolds, et al, 2018). Dating as far back as the 1500s, corks have been used for several different purposes. The original use of the cork was to plug bottles of olive oil (Mortensen & Marks, 2002). Corks have even been found in Roman shipwrecks. It was not until the 1600s that corks were known to be used in wine bottles. This method was first used by the Egyptians, Greeks, and the Romans.

Screwcaps were introduced in the 1960s and were first known as the Stelvin. The Stelvin was made of aluminum and was treated with chemicals, making it completely different from the traditional cork stopper (Mortenson & Marks, 2002). The Stelvin was first used by the Australians. By 1980, the majority of wines produced by them were sealed with screwcaps.

## **Current Consumer Perceptions on Wine Bottle Closures**

Currently, there are stereotypes given to both natural corks and screwcaps by consumers who base their wine purchasing decisions off these. Wine is unique because it is difficult for a consumer to know exactly what they are buying just by looking at the package (Barber, et al, 2009). Without being able to smell or taste the wine, they only have the extrinsic attributes to go by to best guess what they are buying. This is why it is important to understand the consumers' judgements on intrinsic and extrinsic attributes of a wine, because it determines the wine quality they view in a bottle before even tasting it (Reynolds, et al, 2018).

Screwcaps are typically given the label of *cheap* wine and is not typically socially acceptable yet. However, sommeliers and wine experts in the industry have found that individuals with more education and a higher income find screwcap bottles as well as other

alternative closure types to have a positive judgement towards those wines (Reynolds, et al 2008).

Natural corks are given special judgement by consumers. In fact, there is even a term for the act of assuming a wine is better quality just based on the closure type – it is called the Halo Effect. Consumers believe that wines stopped with natural cork are of better quality and are socially acceptable for occasions.

As far as generational differences in perception, millennials are currently the biggest consumers of wine in the industry. The millennial market is known for certain traits that contribute to their purchasing behaviors. For one, they have a major concern for environment and social responsibility issues (Barber, et al, 2009). They also tend to be trendier and care more about appearance and good quality. The second biggest consumer of wine is the baby boomer generation. This generation is more homogeneous in their buying patterns (Barber, et al, 2009). They are more likely to buy what is reasonably priced and a good value for their money. They prioritize ease of use.

A study done using qualitative methods of surveying in 2009 had results proving that millennials view screw cap closures to indicate cheap wine (Barber, et al, 2009). Baby boomers also have that view, but still prefer them more than millennials do due to ease of opening and storage. (Barber, et al, 2009).

A study was done in 2018 (Reynolds, et al, 2018) to prove that the halo effect was true, and that consumer perceptions on wine are heavily influenced by their closure type. In the experiment, participants were chosen from a convenient sample at a college to fill out a survey and do a wine tasting. The written survey gathered information on the participants' consumption

habits and experience with wine, and the experiment tested the hypothesis that the halo effect would be present once they saw the wine they were tasting.

Four wines were displayed at the tasting – one with a natural cork stopper, one with a screw cap, one with a glass stopper, and one with synthetic cork. Participants were asked to taste all four wines, which were in disguise and were actually only two wines. At the end of the tasting, participants were to rate the wines on their quality. Results showed that overall quality perception was given to the wines with the natural cork, proving that the halo effect was present when compared with screw caps (Reynolds, et al, 2018).

The experiment performed goes to show the current consumer perception of wines with cork stoppers versus alternative stoppers.

### **Benefits and Limitations to Both Closure Types**

One of the biggest problems found with natural cork is the dreaded cork taint. Cork taint diminishes the fruit quality in a wine and is caused by a type of mold that infects the cork, that can be referred to as TCA (Mortensen & Marks, 2002). Oxidation is also a common issue found in corks. Natural corks contain minuscule pores in them, allowing oxygen to pass through (which can be beneficial for the wine). However, if too much oxygen gets through, it can cause the wine to spoil and have a foul smell and taste. In general, 5-8% of wine produced worldwide with natural cork tends to fail in some way (Barber, et al, 2009).

Other possible faults caused by natural corks include inconsistency in wine and their high cost. Natural corks are more costly than synthetic since they are tougher to make. Inconsistency occurs due to the minuscule pores in each cork. Because it is completely natural, no two traditional corks are the same.



While there are a few unwanted faults to natural corks, there are lots of benefits to them too. For one, the traditional cork offers the romance of opening a new bottle of wine that consumers love. The best benefit of natural cork is the excellent breathability (Canterbury, 2019). “Oxygen is one of the main factors for wine’s evolution”. (Vidal, et al, 2017, p. 388). Natural cork is ideal for aging wine, as the oxygen over time can change and enhance the flavor and aroma of the wine.

As for screwcaps, there are few limitations to this closure method. For those who enjoy aging wines and observing the improved changes of a wine, screwcaps do not offer that ability as they keep the wine airtight. The other limitation to screwcaps is simply the presentation. Opening a screwcap bottle of wine does not offer the same atmospheric effect as opening a wine with a cork. They do not look as appealing at social gatherings or offer a look of quality.

There are surprisingly lots of benefits to screwcaps. They are easy to open, close, and store. They do not need to be stored on their side, as wines with corks do. The wine has less of a chance of being affected by mold or other unwanted flaws as those with corks do and does not go bad as fast once opened. The wine also has a better chance of being consistent every time with a screwcap (Canterbury, 2019).

## **Future Methods**

Screwcaps increasingly becoming more and more popular. While natural corks will still out rule other alternative closure methods and remain the most traditional and desired, screwcaps and synthetic corks are becoming more socially acceptable. Synthetic corks are made to look like natural corks while preventing the possibility of cork taint but are made from material that is

non-biodegradable such as polyethylene. These are also becoming more popular and would be an insightful topic to study in the future.

In the 2018 study, results showed that glass stoppers were actually rated as better in appearance after natural corks and before screwcaps and synthetic corks. This could possibly be due to the fact that it is relatively new to the wine market, creating a chic look that is attractive to millennials (Reynolds, et al, 2018). Because they are so new, glass stoppers are relatively similar in price to natural corks but are predicted to go down in price as they become more available.

It is suggested that with more education, consumers will be more open to purchasing wines with screwcaps. It is expected that the American market will grow more comfortable with alternative closures just as they have with other technologies in the wine industry, such as boxed wine and wine on tap (Barber, et al, 2009).

### **Methodology**

In this literature review, I performed a qualitative method of research by focusing on historical research on the topic. Secondary data was gathered from recently published experiments and surveys. As the researcher, repeated information became clear as similar concepts and studies were found on my topic.

### **Findings**

Several findings were discovered through this literature review. For one, it is clear that screwcaps are incredibly underrated. While natural cork still has its benefits with aging wine, screwcaps contribute more positive qualities when it comes to preserving and protecting wine. It was also discovered that millennials are the biggest wine consumers in the market, followed by

baby boomers. Millennials prioritize quality of wine, which they judge by appearance of the bottle, including closure types. Baby boomers prioritize price of wine and ease of opening when selecting a bottle. (Barber, et al, 2009).

It was confirmed that natural cork is still preferred over any other closure method, even though screwcaps are slowly becoming more popular and socially accepted. Natural cork gives off a sense of high quality, and the Halo Effect is true when it comes to consumer perception of appearance. (Reynolds, et al, 2018).

Lastly, glass stoppers are predicted to be the new popular alternative closing method. They are considered chic and are fairly new to the wine market and are at about the same price point as natural corks.

### **Limitations**

Limitations to this literature review include few selections of articles to choose from when researching. There is a very limited number of peer-reviewed studies available on this topic, so hopefully as alternative wine closure methods become popular, more research will be conducted and published. In the literature reviews used in this paper, one thing that was lacking from each was a final answer on which wine closure method was actually most effective. Pros and cons were given to both screwcaps and natural corks, but no conclusion stated a final decision. As for now, the decision is still a personal choice.

### **Implications for Future Research**

For future research, it is recommended that we look at different purchasing situations, including how different packaging attributes impact the wine selected by consumers, and how

knowledge and confidence influence that decision (Barber, et al, 2009). It is also suggested that restaurants, bars, and wineries can better please consumers by offering wines with natural cork rather than screwcaps (Barber, et al, 2009).

### **Conclusion**

In conclusion, the demand for natural cork stoppers in wine is not going anywhere. However, screwcaps are becoming more socially acceptable than they once were and will eventually become more popular. The history of the cork is rich and will always have a traditional romance to it. The Halo Effect is proven true, as consumers generally assume that a wine is better quality just by the looks of a natural cork. Millennials are the prime market to cater to when marketing and promoting wine. Qualitative methods were performed in this literature review, and secondary data was used. Limitations include a weak sample and lack of generalization to experiments. In the future, glass stoppers should be studied more, and the food and beverage industry should continue to offer wine with natural corks on their menu to please customers. Natural corks and screwcaps both have their pros and their cons, but ultimately natural corks are not going anywhere, and alternative methods will take some time and tweaking before becoming as popular as the traditional closing method.

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