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LIQUID CULTURE

## Cork vs. Screw Cap

What's all the  
fuss about?

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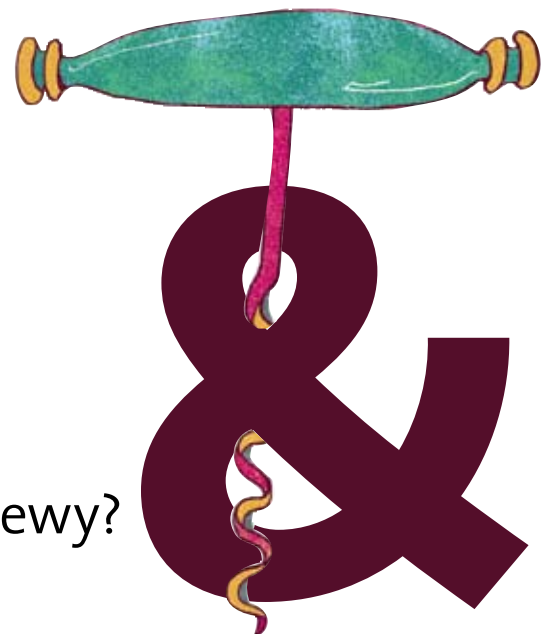
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# Twist



Is it time to stick a fork in cork?  
Are screw caps a savior or plain screwy?  
Will the two ever get along?



# Turn

Story by AMY ZAVATTO  
Illustrations by KIM ROSEN

# C

ertain topics are nearly guaranteed to take polite conversation and turn it into a smackdown. Like politics, for instance. Religion, of course. Public school versus private education. Red Sox versus Yankees. But corks versus screw caps?

While Hillary, Obama, McCain and the rest of the 2008 podium dwellers aren't likely to duke it out over bottle closures, cork has become an increasingly heated topic in the wine community. Is the traditional, natural cork closure the cherry on the sundae? Is the screw cap a semi-modern miracle, and even if it is, can people really get over the loss of that lovely squeak-and-pop sound of a cork? (Answers: Maybe, sort of. Check back with us in a decade or two.)

At its best and most practical, the question of whether to use cork or not has wineries and winemakers striving to learn more about what, precisely, causes "corked" wine and whether it is preventable. The taint that causes that tell-tale musty, moldy, wet-newspapers-in-the-basement aroma can render a bottle un-drinkable, or at the very least strip the wine of its fruity characteristics.

At its worst, the accusations fly:

"Cork companies are rich aristocrats and want to stay that way!"

"Screw cap makers want to take over and monopolize the wine business using slanderous campaigns!"

"Cork has passed its useful prime!"

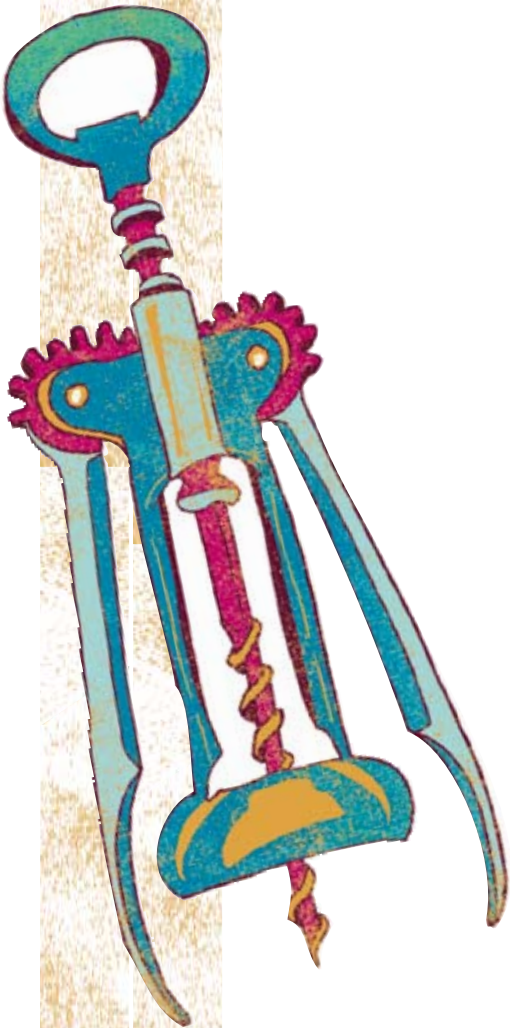
"Screw caps are about as romantic as a meal prepared in a replicator on the Star Ship Enterprise!"

It's hard to get off the fence and pull the rope for one team or the other. Back in March 2005, even *Wine Spectator* printed contradictory articles in the same issue from two of its most respected writers—one pro-cork, one anti-cork; both passionate, convincing missives. And as for the wineries and the rest of the wine community at large, the debate continues to rage, with some sticking by cork for its well-tested aging potential and downright romance, and others saying, "Feh!" and embracing what they believe is the assuredness of the screw cap.

So who's right? And if you're just the average wine-loving consumer, where should you plunk down your Cab-loving cash?

## TC Wha?

First, let's all agree on one thing: Ideal stopper or not, as a natural, renewable product that springs from the earth, cork is nothing short of amazing. Cork trees, which are in the oak family, grow predominantly in Portugal and Spain, but also are found elsewhere, such as Sicily, Tunisia, Algeria,



Morocco and South Africa. They live upward of 200 years. To use them, the trees need not be cut down, as it is their bark that provides the cork. Cork bark can be harvested numerous times throughout the tree's life (although it takes about nine years between sloughings, done by hand with hatchets, to ready itself again). Aside from wine, for which the bark's tough but malleable nature is the ultimate in forgiving for myriad bottleneck sizes, cork is used for flooring, sound-proofing, insulation, Birkenstocks, bulletin boards, you name it. Is it easy to sing the praises of cork? Yes. Is it perfect? No.

"Corks are a great closure for wine except for the fact that they can ruin it," says winemaker Kareem Massoud of Long Island's Paumanok Vineyards with the deadpan, assured delivery of an umpire calling "out!" Massoud and his family just took a big gamble on the alternative: They invested about \$100,000 in a brand-new screw cap-bottling machine, an idea they've been warming up to for nearly a decade. Although only a small percentage of cork will ever spoil the wine it seals, Massoud isn't willing to take that risk.

With an average of only about 30 vintages in the lifetime of a winemaker, it's easy to see how the lure of the cap holds practical appeal against even a slight chance of cork-taint. But here's where much of the misunderstandings about corked wine come from. While cork gets the brunt of the blame for wine gone bad—which some winemakers feel is justified; others don't—the problem is actually a funky chemical compound, discovered only in the late-20th century, called trichloroanisole, or TCA. Jean Arnold Sessions of Hanzell Vineyards in Sonoma, Calif., learned a lot about TCA when it nearly wiped out Hanzell's entire 2000 Chardonnay vintage. When she explains it, it sounds something like a cautionary bedtime story for winemakers.

"You have chlorine in water to sanitize it, and chlorine kills mold," she says. "Well, you know where mold is in the natural world: everywhere! So you use chlorine and hot water to clean and sanitize your steel sinks, your cement floor, everything." Jean points out that the molecule that's in the chlorine to kill mold—which is not TCA yet—loves organic material and clings to it and that in a place where you're producing a food product like wine, there's tons of organic material, mold being one such type. "And mold hates chlorine!" she adds. "So mold attacks that little molecule and changes the molecule to TCA." The end.

Not quite. Cork is certainly vulnerable to TCA taint because it's a natural product susceptible to mold, and also because chlorine was widely used to clean cork before being shipped off to winemakers—a



## Smelling Is Believing

How can you smell TCA? The touchstones of wet newspaper or wet cardboard are certainly universal, but short of waiting for a rainy recycle day, there are other methods of training your nose to detect taint. Go to the grocery store and get one of those bags of pre-peeled carrots, says Jean Sessions. Somewhere along the way when those carrots are washed and pre-peeled, there's chlorine used to sanitize them. Pull the top open and put your nose in it. That's TCA. We tried Sessions' suggestion and, indeed, when we yanked open the bag there was the faintest initial aroma of cardboard. Banana stems are also a good spot to catch a little whiff, she says. However, if you prefer to get fancier about it, Brizard & Co., the folks who bring you *Le Nez du Vin*, those incredible aroma kits holding every imaginable scent you can find in wine, also has an über-geeky, fun product called *Wine Faults*. The kit includes scent samples of corked wine and 11 other wine-aroma maladies: vegetal, rotten apple, vinegar, glue, soap, sulfur, rotten egg, onion, cauliflower, horse and moldy-earthly. *About \$120, nezduvin.co.uk.*

## The Closer

There are other closure options on the market besides corks and screw caps. Here are a few you might see:

**PLASTIC**—One thing many wine pros seem to agree on is that plastic corks don't pass muster just yet. Why? So far, they don't seem to work for aging and they tend to allow too much oxygen into the bottle. "Synthetic stoppers have pretty widely accepted problems," says George Taber. "Many of them start letting in air after 14 months or so." Too much oxygen will react with wine the same way it will with an apple you slice open and leave on a countertop, turning it from a pretty, juicy, appetizing color to blah brown.

**COMPOSITE CORK**—Also called compound agglomerate cork, this closure comes from ground-up cork that is coated with an adhesive to bind the tiny bits together and pressed into shape. Heat makes the pieces stick together. Composite cork is still vulnerable to TCA taint, but some cork companies like South Africa's Cork Supply Group have come up with technology that supposedly extracts any TCA taint prior to the cork-making process. As with plastic, though, the consensus on composite is that it's most useful for wines meant to be consumed within a two-year period.

**GLASS STOPPER**—Initially created by German physician Karl Matheis after the turn of the 21st century, the Vino-Lock or Vino-Seal (aka the glass wine stopper) is a T-shaped stopper made of glass (or, in less-expensive versions, acrylic) and, once in the bottle, sealed with an aluminum cover. It offers the same benefits as screw caps but with the bonus of prettier packaging. Downside: They cost anywhere from 40 to 70 cents per closure, which adds to the end cost of your wine.

**BOX**—Wine contained in a plastic bag and sealed into a box, similar to the sippy kind kids use. The major downside is obvious—a sommelier plunking down a box of pinot on a table is about as sophisticated as dining in a rusted-out Chevy on cinderblocks. But, aside from a short shelf life, the benefit is that it does stave off oxidation and, once opened, it doesn't go bad as quickly as a regular bottle of wine.

**CAN**—Again, self-respecting somms will not be flip-topping wine at tables anytime soon. Or maybe it's even safe to say ever. One bonus is, like soda, canned wine can hold carbonation, and some wine companies have released wines in this form, like Sofia (complete with a tiny sippy straw). Late 2007 saw a couple of interesting entries into the canned-wine arena, including Paradocx Vineyard in Pennsylvania, which released 4,000 of its red and white blends this past November in paint cans.

**CROWN CAP**—Used during the second fermentation period that brings on the bubbles for champagne and sparkling wine, you might be more familiar with the crown cap on bottles of Belgian and German beers—and, of course, retro soda bottles. Convinced of their proven ability as a closure, some winemakers have attempted to use them on sparkling and non-sparkling wines, but oddly the device used in this arena is getting more pushback than screw cap.



trend that has waned since TCA was isolated as a problem in the 1980s. But even without using it as a cork-cleaning agent, chlorine can exist in other seemingly innocuous places. For example, Sessions says, "You can't have wine in open barrels or tanks anywhere near where you store your paper products, because somewhere along the line paper meets with chlorine."

As Sessions discovered, TCA in cork isn't always the culprit. Her case of "corked" wine actually had to do with cellar taint, which affected the wine before the cork even hit the bottle. As she learned, TCA can also spawn from must, barrels or even wood palettes (wood preservatives contain a slightly different chemical called TBA, whose presence yields the same results). So it stands to reason that TCA can also exist in wines topped with screw caps, if the taint happened prior to bottling. Some anti-cappers even say it can exist on the plastic inside the cap.

Cork, however, is big business—only about a quarter of cork production is aimed at making wine stoppers, but a whopping 70 percent of cork profits hail from this slender slice of the pie. "If the cork producers were ever to lose 100 percent of the [wine] market, the industry would really suffer because from Birkenstock shoes to cork boards, that's not really where you make your money," says George Taber, author of *To Cork or Not to Cork: Tradition, Romance, Science, and the Battle for the Wine Bottle* (Scribner 2007), the first book to put cork's past, present and future under the microscope, warts and all. With the truth of TCA's origins becoming more and more well known, it's hard to continue to blame spoiled wine entirely on the cork producers.

## Age Before Beauty?

While the bob, weave and jab between corks and screw caps appears to take on endless rounds in the ring, the biggest challenge to screw caps remains the golden ticket cork advocates cling to: its proven track record for aging.

"We're not moving away from cork," Sessions says. "We believe in cork because there haven't been enough experiments on screw caps to show how truly great wines that are meant to age 20 or 30 years will continue to age. I believe in screw cap and alternative closures for wine that's meant to be consumed quickly, but for wines that are truly age-worthy, I'm for cork."

When interviewed, Paumanok had yet to employ its screw cap machine, and they expected some trial and error when they got to work on the 2007 vintage, but Massoud had a compelling theory. Wine, he says, tends to age better in a larger bottle with a cork closure, like a magnum, because the ratio of wine to air is less than in a typical 750-milliliter bottle. "The point is there's less air in there, so the wine ages better." Massoud's logic is that wines topped with screw caps will also allow a wine to age better because the caps don't allow oxygen to seep into bottles. (Some oxygen is a good thing; see sidebar "Reduction-duction, What's Your Function, right.")

Rollin Soles, winemaker and part owner of Argyle Winery in Oregon's Willamette Valley, falls in line with Massoud. "Screw caps are a closure with 40 years of experience in some shape or form," he says. "When a consumer buys a case of wine under cork, every one of those 12 bottles has the potential to taste different. If you buy a case with a screw cap, every one of those bottles will taste the same."

Soles put his money where his bottle-mouth was back in 2000, when he switched his entire operation (save for sparkling wines) to twist-off. "We switched over frustration with the cork industry," he says. "The whole idea is to deliver consistent quality to the consumer, and the cork producers weren't willing to stand behind their product, especially back then." But while Soles admits that cork producers have made great efforts as of late to improve their quality control measures, he still feels the risk of ruining even one bottle of wine is just too great.

With so many questions remaining, Taber is reluctant to join one camp or the other. As it is, only about 5 percent of American wineries are using screw tops (although the ones who have, like Argyle, Bonny Doon, Tamas and Plumpjack, have had great success so far). There aren't even solid statistics on how many wines are affected by cork taint, with the numbers ranging from 1 or 2 percent to 10 to 15 percent.

Of course, it depends on who you ask. "It's an unresolved issue at this time," Taber says. "I don't think either side has the perfect solution." That may be why some wineries are employing both techniques, using screw caps for wines meant to be readily consumed and corks for those needing to be aged.

At the ground level, the attitude of the average wine buyer on screw caps seems simultaneously encouraging and slow-moving. Restaurateur Drew Nieporent, whose Myriad Restaurant Group includes Manhattan's Tribeca Grill and Nobu in New York and London, and also is part-owner of the New York City wine shop Crush, sees slow change. While Crush sells many screw cap bottles, it doesn't appear to be as accepted in Nieporent's restaurants. "It's going to take a little time because obviously the culture and ritual of wine is with cork," he says. "It's hard to walk up to a table with a screw cap." It might not be as showy or dramatic as cork, but he believes it's simply a matter of time before screw caps dominate.

And there are sommeliers like Tim Baldwin, the wine director at Colorado Springs' 107-year-old resort The Broadmoor, who over the last year and a half says he's noticed significant changes in the property's more modern eateries like Summit, where screw caps are easily accepted, but which would make brows furrow in their more European-minded Penrose Room, which has first-growth Bordeaux from 1945 on its wine list. "Three years ago, the perception of screw tops in a restaurant was poor," he says. "Whenever I would walk to a table and open a screw top, people would look alarmed and ask if I brought them the wrong wine. I don't see much issue with it now in the restaurants."

Even with his full-on embrace of screw caps, Massoud believes the one thing you simply can't replace is the tradition and romance behind cork—even if, to him, it's the equivalent of shaking a bad habit. "There's no substitute for pulling a cork out of the bottle and hearing it go 'pop!'" he says. "It's like somebody quitting smoking. You can take the patch, you can chew gum, but you're never going to replace the feeling of having a cocktail in one hand and a smoke in the other." ■



## Reduction-duction, What's Your Function?

While too much oxygen is bad for wine, not enough isn't great either. When a wine falls into the latter category, it is said to be reductive and is a potential problem for the screw cap industry. "When you have a reductive wine, you can have all kinds of sulfur compounds that form as a consequence of being in a reductive state," Kareem Massoud says. "One of the simple solutions for a reductive wine is giving it air in the earlier stages. But a way to solve a more serious reductive problem is by adding copper. Too much of the heavy metal, though, is not just a potential health risk, it's by and large illegal." The issue came up in late 2007 when New Zealand's Te Kairanga Wines had 4,000 screw cap bottles of pinot noir rejected by Germany for over-the-top copper amounts. "It is an issue," George Taber says, "and one of the ones that hasn't been resolved yet. It's the bump on the road to everyone using screw caps."