

The wine industry looks at alternatives to barrels that mimic the flavor of oak casks for less

Derrick Schneider, Special to The Chronicle

Talk about **oak** in **wine**, and one might picture rows of barrels, each cask snuggled into the two below. Go on a winery tour, and you'll march past walls of barrel tops decorated with coopers' stylized logos and winemakers' chalked notes. Read an account of visiting a French cellar, and you'll see descriptions of weathered barrels.

Perhaps even more than vines, barrels are the most iconic symbol of a winery. **Wine** and **oak** casks have been partners for centuries.

But if you like **oak** character and relatively inexpensive wines, your nightly beverage probably didn't carry on that tradition. Modern wineries have started to oust barrels from their throne. Barrel alternatives - staves, chips and dust tossed into stainless steel tanks with the **wine** - have gained ground in cellars by offering winemakers new opportunities, mimicking the best aspects of casks and giving customers the **oak**-influenced flavor profile they want. Even some Bordeaux winemakers use them, though the French government will soon ban alternatives for wines bearing the famous region's name.

But even when winemakers use barrel alternatives, few of them advertise the fact, in part because of a lingering suspicion about chips and their kin.

"There used to be an image of (using barrel alternatives) as a stigma, sort of a shortcut or an artificial product," says Brian Geagan, who sells barrels on behalf of Canton Cooperage, a respected barrel maker based in Kentucky, "and barrel aging and the whole ambience of a barrel cellar are sort of a sacred image."

The more you pay for a bottle, the more you expect that romance.

Outspoken winemaker Randall Grahm, owner of Bonny Doon Vineyard, is one of those who has come around to barrel alternatives, though his relationship with them is conflicted.

"A barrel is a very nice place to keep **wine**," says Grahm. "Wood in general seems to add structure to red **wine**. It fills out the **wine**, gives it a musculature. It hardens the bones. It contributes tannin. It's a very nice vessel for the exchange of oxygen; it's perfect for the maturation of the **wine**."

Of barrel alternatives in the winery, he says: "We're trained to preserve something like integrity in the **wine**. It's hard to know how to define that. Do barrels deform integrity and **oak** chips don't?"

He mixes wood shavings into the grape juice as it ferments into **wine**. For Grahm, who often has off-the-beaten-path ideas, it's a mainstream practice. Winemakers use barrel alternatives in two main ways. Like Grahm, they can put **oak** dust - really shavings like those in a pencil sharpener - into the fermenter with the crushed grapes. The flecks don't impart **oak** character, but the molecules in the wood interact with the juice to stabilize color and tame the vegetal aromas - bell pepper, for example - common in Bordeaux varieties such as Cabernet Sauvignon, Merlot and Cabernet Franc.

Tailoring wood to wine

Or, once the juice ferments, winemakers can choose larger barrel alternatives to flavor the **wine**. They might have several reasons to choose one type over another, including the price of the final product, but often the crucial variable is the amount of time the **wine** will sit with the wood. **Oak** chips, small chunks that would look at home in a backyard smoker, have a high surface-area-to-volume ratio: They flavor **wine** quicker than a long, thick stave.

Planks, or staves, bolted into a stainless steel tank and chips bobbing in the **wine** add wood character but not oxygen, which **wine** needs to mature. To solve that problem, winemakers use micro-oxygenation, often shortened to micro-ox, a simple process where a pump dribbles oxygen into the **wine**.

That step may require some extra work, but it saves a lot of space - and ultimately money - compared with barrels. "I think that initially what brings people to barrel alternatives is the massive amount of space and labor that barrels require," says winemaker Mike Robustelli of McManis Family Vineyards in Ripon (San Joaquin County).

"The size tanks that we have the most of are 14 feet in diameter and 16 feet tall. They hold 18,000 gallons. You would need 300 barrels to hold that much **wine**." For every chore the **wine** requires, "you can do it once in a tank, or you can do it 300 times in barrels." And that doesn't include cleaning the barrels or moving them about.

Space and labor cost money, but so do the barrels themselves. Barrel alternatives can keep wineries above the bottom line. **Oak** barrels are an investment for winery and consumer alike, but the American palate, at least, equates new **oak** with quality, and wineries often have to restock barrels every year. A new 60-gallon French **oak** barrel, about 300 bottles, costs around \$850, and if you assume the winery can recover half the cost of a barrel the next year by selling it to another winery or reusing it instead of buying a 1-year-old barrel, it adds \$1.40 per bottle. Once distributors and retailers mark up the **wine**, that barrel alone, without labor and space costs, has added \$2.80 or so to the retail cost of a **wine**: If you're drinking an under-\$20 **wine** with nice **oak** character, that flavor probably comes from wood in **wine**, not **wine** in wood.

Even winemakers who line their cellars with barrels might use alternatives to rejuvenate old casks, which stop imparting flavor to a **wine** after three years. "You can put new fresh **oak** staves in the barrel," says Geagan, who also sells barrel alternatives for Canton's XTRAOAK division.

"There are also ways to introduce **oak** through the bung hole: A chain of **oak** blocks or 1 inch spheres we call 'soakers.' " So winemakers face a stark decision: Buy a new barrel for \$850 or 30 pounds of chips, at \$2 per pound, for 1,000 gallons? But if cost sparks interest in barrel alternatives, control captures the heart.

A toast to choice

"The manner in which most alternatives are toasted is a much more controllable way to toast wood," says Robustelli. Coopers toast, or char, barrels over a flickering, open flame, but they toast alternatives in the constant temperature of a convection oven.

"The toasting of the barrel determines which flavors the wines will extract from wood. If you've got more consistent toasting from year to year, you're going to extract consistent flavors."

The wood itself varies, too. **Oak** trees respond to their environment the same way grapevines do.

"Selecting barrels is very dicey," says Grahm. "The analogy I make is buying fish. You have to have a very intimate relationship with your fishmonger or barrel provider in order to get products. Someone has to get the bad barrels, and you have to try to make sure it's not you."

The explosion of **wine** production around the world in the last three decades has only made the problem worse, as more wineries compete for a relatively constant number of great barrels. Smaller barrel alternatives, such as chips, blend wood from multiple trees for consistency.

But sometimes average isn't good enough. Mel Knox, a straight-shooting and jovial barrel broker in San Francisco, talks passionately about what a great barrel can add to great fruit.

"When you take quality, tight-grained wood," he says, "you get a certain level of vanillins, a certain amount of clove and nutmeg. You get a little bit of coconut, the so-called whiskey lactones. You get all of that in an interplay with wood tannins. It just works out really, really well. You get something that I don't think we've produced with barrel alternatives yet.

"On the other hand, if you have a barrel made with **oak** that hasn't been properly seasoned, you get astringency and bitter; it's hard to argue for that flavor profile."

And sometimes even variability is good, as long as it's not too much. "The beauty of a barrel program is the complexity of the final blend," says Geagan, wearing his barrel salesman hat. "In very subtle ways, every barrel has something to offer. The end result in the **wine** is greater than the sum of its parts."

Beyond cost and consistency, some winemakers see environmental benefits to chips and other alternatives. A good cooperage uses only about 25 percent of a tree for barrels: The wood can't be too young or too old. Clark Smith, the frank winemaker best known for his **wine** fix-it-shop company, Vinovation, thinks heavy barrel use is irresponsible. "I just got a press release from Kendall-Jackson where they were bragging that they have their own mill in France and never use alternatives," he says.

"They certainly have the knowledgeable staff to realize they could do a better job and save the customer money by utilizing this nonrenewable resource more intelligently, but they'd rather cut 'em down and maintain a 75 percent waste rate of the best wood to maintain the trappings of quality for the media."

"I'm often perplexed about people who go off on a tangent about it not being environmentally correct," says George Rose, vice president of public relations for Kendall-Jackson. "More **oak** trees are being planted than are being cut down in France, and that trend is happening here in the U.S. It doesn't get much more sustainable than that."

And it's not as if the other 75 percent of the tree gets tossed away, he says. "The people who farm these trees have a market for every piece of that wood," he says. "Flooring is just one example. **Oak** flooring is a huge worldwide business. If anything, people are using **oak** flooring more than ever." And many cooperages, French and American alike, use the waste to make barrel alternatives.

Rose acknowledges the cost issues, but points out that Kendall-Jackson's French stave mill helps keep costs more reasonable. The company's winemakers investigated barrel alternatives but ultimately rejected them.

"A tea bag (a permeable bag filled with **oak** chips) imparts a flavor of **oak**," he says, "but not a refined or elegant flavor. It's not a smooth **oak** flavor. It's almost like a soda pop answer to adding **oak** to your **wine**."

If chips and dust and tiny bubbles provide consistency, do they also provide quality? Can one sip distinguish a barreled **wine** from one made with alternatives? Not necessarily.

A difference in taste?

Galina Seabrook, senior winemaker for Oenodev, a **wine**-consulting company that trains winemakers about micro-ox and specialized blends of chips, says that she worked with one high-profile Napa winery to mimic the taste of its expensive reserve **wine**. According to Seabrook, tasters split 50-50 on which they preferred.

New, high-quality alternatives act just like the wood in a barrel wall. "We make our chips from wood that's been air-dried outside for 18 to 24 months," says Seabrook, describing a curing process akin to wood bound for barrels. "Before we toast the chips, we sieve them so that we toast uniform pieces." Then **Oenodev** toasts the chips to precise temperatures, selling packages to winemakers that deliver the most vanilla or cocoa flavors, for example.

That level of quality has helped wash away the stigma that alternatives labored under for years. In the past, quality-conscious winemakers considered them shortcuts; now, they're valuable tools with a growing fan base. "If someone's having success with an alternative," says Geagan, "word gets around." Although Geagan hasn't seen a decrease in barrel sales yet, some winemakers who use them don't want to go back.

"I'm never buying a new barrel again," says Smith.

Nonetheless, most winemakers keep mum about barrel alternatives. Romance and tradition drive the marketing messages of the **wine** industry, not chip blends and micro-ox. This often puts wineries in the uncomfortable position of preaching one practice while doing another. **Oak** adds flavor and tannin to a **wine** that it would never have from the fruit, as it has for centuries, though new **oak** as a specific flavor component is relatively recent. Does it matter whether those added flavors come from a round container or a bag of blocks?

"Only consumers at a certain level are concerned by it," says Geagan. "If people get a good glass of **wine** at a decent price, they're happy."