
WINES & VINES

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Oak and the Economy

Tighter winery budgets and better products boost alternatives

by Paul Franson

Between the weak economy and improvements in barrel alternatives, many wineries are looking to replace expensive new barrels with other forms of oak. They're considering cheaper barrels from new regions, renovating used barrels, using the barrels longer and adopting a variety of oak formats from powder to staves and even liquid tannins.

"There's definitely an increase in the use of alternatives," says Phillip Michel of Oak Traditions. "There's a concern about costs, and today's alternatives are better, while there are new suppliers."

Bruce Felix of Pacific Winemaking, which represents Tonnellerie Mercier and Radoux Pronektar, adds, "There are certainly more wineries looking at how alternatives can complement their winemaking. Now that the quality of the alternatives are improving, they will find a greater market."

Money is a real issue. Oak barrel alternatives "are becoming more important, especially in the lower-tier market segment that many consumers have moved to," says Phil Burton of Barrel Builders. "Saving money is a real issue; you can't justify aging a \$12 bottle of wine in a \$900 barrel."

Cyril Derreumaux of Oenodev's Vivelys division points out, "Alternatives allow the opportunity to reuse a perfectly good container they made an investment in, at a fraction of the cost of a new barrel, generally between 80% and 90% savings."

And Bernard Pradel of Toasted Oak Inc., adds, "Even at \$1,000 per barrel, if used for 2.5 years of useful flavor impact for approximately 560 liters, the barrel represents about \$2 per liter or \$1.50 per bottle. The alternatives are here to stay. Their average cost per liter ranges from 3 cents to 20 cents per liter."

Moving up market

Traditionally, barrel alternatives have been used to make inexpensive wines, but they're moving up market. Obviously, they are most popular at the lower end of the wine market, certainly under \$15, notes Phillip Michel of Oak Traditions. He says chips are used to add flavor during aging, mostly in wines that sell for less than \$8.

Derreumaux adds, "Large wineries have long been using alternatives as a cost-saving approach to making wine with oak, but today more medium-size wineries are becoming interested in alternatives as a way to

get more results from the money they invest in oak each year. It can be a significant portion of a wine's cost, if it is dominated by new oak barrels. The recession may have accelerated it, but the trend has been there for the last few years among medium-size wineries."

Pradel of Toasted Oak agrees. "It has been a trend that has been obvious for the large wineries, and the smaller wineries are finally giving in, as the image of alternatives has changed and the realization that it is a new tool that makes crafting wines with a particular flavor profile easier. The recession has influenced the decision making of many winemakers to try alternatives, and the results have confirmed their value. The cost savings are huge for mid-sized and small wineries' budgets."

Gil Owens, owner of Carolina Wine Supply, says, "Our barrel business was way down in '09, but our re-coop barrel sales—along with the usual oak alternatives like spirals and beans—were up significantly."

The trend is also reaching higher in the market. "The economy has influenced more of the premium and ultra premium labels to look into ways to decrease their new barrel budgets, and many are pleasantly surprised to find there are many premium oak infusion products and expansive flavor profiles available to them," says Alicia McBride of Innerstave.

Suppliers disagree about the penetration of alternatives in mid-priced wines and above.

"The medium price wine is where we see the changes taking place," says Aaron Hart, national sales manager of J. Rettenmaier USA in Schoolcraft, Mich. "Many are looking at the cost of replacing a good French oak barrel and the use of oak alternatives is very attractive. Some are looking to keep their old barrels and use staves or inserts to extend barrel life."

He adds, "We recently have had more premium wineries ask for inserts for their oak barrels. There is a large investment in barrels that are not giving the same oak profiles they were when new. The use of inserts, refurbishing barrels and oak alternatives are rising."

And Scott Harrop of Cork Supply Group, which also sells oak barrels and alternatives, says, "Even some higher end wineries on the North Coast have been running alternative trials for two to three years, mainly in neutral barrels."

Rebecca McFall of Wine Oak in Napa says the higher-end wineries are "absolutely" looking at alternatives. "Extending the life of a barrel and a general willingness to learn about alternatives is noticeable." She adds, however, that most are not being outspoken about it.

At StaVin, Jeff Murrell says, "Premium wineries are using alternatives both in barrel and in tank." He adds, "Refurbished barrels are not as popular, due to the lack of quality results obtained using this method."

But Barrel Builders' Burton says, "Most premium and ultra premium wineries still won't touch alternatives."

"Premium wineries will typically not cut barrels out of their program to add inserts," says Steve Kemiji of ReCoop. "They will save money by reducing new barrel purchases."

Others find they're being used, but selectively. **Derreumaux of Vivelys** says premium wineries are using premium oak chips as a way to fine-tune their wines before bottling, even after the wine has aged in barrels. "If a winemaker feels that the wine aged in barrel has not achieved what was intended, oak alternatives can be a method of getting the wine to the winemaker's goal quickly and easily."

McBride of Innerstave says, "The premium wineries are using oak infusion products mostly in barrel."

Rick DeFerrari of Oregon Barrel Works says he sees premium wineries using oak products, but more in the form of beads, cubes and blocks during fermentation—and not necessarily with the end goal of replacing barrels. Chips are his biggest seller, followed by tank staves. The majority is Oregon oak, but the company added French oak last year.

Meanwhile, Eric Abrial, sales manager at Nadalie USA, notes, "They're not buying alternatives for use in wines selling for more than \$25 per bottle. Some premium wineries are buying alternatives, not for their primary wines, but for second labels and even wines meant for sale in bulk."

He also adds, "Many are also reducing production, which reduces their need for barrels, of course. We sell barrels and alternatives, but obviously the market for cheap wine is better than that for better wines right now."

Alternatives have other attractions, too. **Derreumaux of Vivelys** says, "It's an opportunity to expand the oak flavor profiles in wines. It's also part of the green movement. They have the opportunity to add the 'renewing, reusing and conserving of natural resources' story to their winemaking."

Charlotte Gourraud of Laffort notes that from an accounting point of view, barrels are considered assets, whereas staves or alternatives are consumables. This could matter when spending money.

We shouldn't overlook winemakers, either. They've learned how to best use alternatives. "The alternatives segment of the market has grown over the 10 last years, as the expertise of winemakers has increased," notes Michael Weyna of Canadell.

A look at the choices

The simplest choice for many wineries is to use barrels a little longer. Phil Burton of Barrel Builders notes, "A lot of wineries who used to have a three-year barrel rotation have gone to a four-year cycle. However, this can't go on forever, as at some point the wines will have a different profile. I expect that the new barrel market will improve this year."

Wineries also may buy used barrels. Unfortunately, wineries are using the barrels longer, which reduces the available inventory in the market and increases the cost of used barrels.

"The next problem created with barrels that go into the barrel market after six years is that the bacterial load on these used barrels is even higher, and the potential from Brett and other bacterial issues can seriously contaminate the used-barrel buyer's wine," ReCoop's Steve Kemiji warns.

Phil Burton says barrel shaving has become more popular of late. "Done well, it gives extra life to a barrel, and there are some expensive reds that have at least a portion of their oak from a reconditioned barrel."

He warns, however, that it's not easy. He says some companies did a poor job and caused shaving to fall out of favor, but now it is back in style. "We expect to shave a thousand barrels this year," he says.

Kemiji claims, "Our process not only provides full oak and oxygenation benefits, but also sanitizes the barrel by toasting the wood at a minimum of 15 minutes at 385°F, so cross-contamination will not occur."

Innerstave's McBride, however, warns that "barrel refurbishing is not the best solution, as you are retoast wine that remains in the staves, sometimes creating off flavors."

Another popular way to save money is to buy barrels other than those from top French forests. These include American, Hungarian and other Eastern European oak. Alternatives from those sources are cheaper, too.

Vadai barrels, for example, offers barrels from the high-altitude Zemplen forest in Hungary, Romania and Slovenia at \$580, about half the price of French oak barrels.

Tonelería Magreñan even offers barrels of quercus mongolicus Chinese oak, as well as French and American oak.

Powder, granules and chips during fermentation

Among the most popular alternative forms of oak are untoasted powder, granules and chips used primarily during fermentation to add mouthfeel, stabilize color and reduce green flavors.

"American chips are probably the biggest usage at harvest," says Bernard Pradel of Toasted Oak. "They are used mostly by the very large wineries, as the small amount of tannin and the soft flavor profiles they provide helps color and mouthfeel."

Nicolas Mähler-Besse, general manager of Tonnellerie Radoux in the United States, notes that alternatives were legalized in France two years ago, but not powder. Granules are allowed.

Chips are the most popular adjunct at G.W. Kent, Randy Reichwage says. "We sell both American and French oak chips, but the American oak chips saw the largest increase. The American oak chips are our least expensive oak alternative, and the poor economy is likely the reason for its increased popularity."

Suppliers unveil developments in oak alt market

Many suppliers have introduced new products, including alternatives with various flavor profiles such as vanilla. Here's a sampling of products.

- Best Oak Instant is a new product from J. Rettenmaier. It is French oak dust compressed into granules with no additives or binders. When it comes in contact with juice at crush, it disintegrates.
- Canadell's new Chip-Matrix is a blend of two sizes of French oak chips from two

different oak trees. It brings more nuanced aromatics into a given wine a bit sooner.

- Innerstave has expanded its flavor profiles to include a light toast for winemakers looking to replicate the flavors achieved when using barrels with untoasted heads.
- Laffort will be introducing a new range of Nobile Staves, made with two different processes. One called Sensation enhances sweetness, vanilla and toasty notes; the other, Revelation, mimics aging in barrel.
- Quercus Concepts Inc. has varietal-specific staves for Pinot Noir and Cabernet Sauvignon.
- Tonnellerie Radoux has introduced crosscut staves for more extraction. Radoux Pronektar has developed a process for measuring tannin levels in staves called OakScan. They use it to scan every stave and sort them by tannins.
- **Vivelys** has introduced the Double Chauffe 310 with intense coffee notes, as well as mocha aromatics, but not the highly acrid taste or pungent aroma of other highly toasted products available in the market.

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Oak for aging

While small formats are used in fermentation, large pieces of oak are preferred for aging. Some wineries use small chips and granules, but it is easy to over-oak wines and sometimes produce an unbalanced or even muddy feel.

The alternatives come in two versions: some for used barrels and others for stainless steel tanks.

A number of schemes have been developed to allow winemakers to add wood to barrels through the bunghole and easily retrieve them: Most can only be used once. These include chains of small blocks as well as Infusion Spiral rods from Barrel Mill that can be inserted into the hole. These provide a large surface area. The small pieces work fast, and the wine needs monitoring.

Carolina Wine Supply saw oak spirals growing the most. Richard Hobbs of the Barrel Mill says the spiral rods start around \$56 each to extend the life of a \$1,100 barrel. Each spiral can be used once.

Alternatively, a cooper can remove the barrelhead and install longer pieces or an assembly. This has a slower impact on the wine, but some say it results in better integration, more like a new barrel. Neil Koch, account manager/enologist at Bouchard Cooperages, finds the most popular type of alternative to be “through the head” barrel inserts.

This is obviously more work and more expensive than the products introduced through the bung hole.

Staves for tanks

Larger wineries are moving strongly into assemblies of staves for use in their tanks, but some also use bags of chips suspended mid tank to add oak flavor. This is often combined with micro-oxygenation to help mimic the porosity of barrels.

Innerstave's McBride says, "The most popular formats are barrel inserts for the premium wineries and fan systems for tanks at large wineries. These give the most authentic barrel reproduction with regard to integration of flavors with the wine. By far the most popular in the U.S. is French oak."

Mähler-Besse of Radoux, says the most popular format is fans that can be mounted in the tanks. "They're very efficient to install and remove." He adds, "I'm not a fan of chips. You get better quality with staves, but they need a longer time."

Derreumaux of Vivelys-Oenodev disagrees. "Using oak chips simultaneously with micro-oxygenation is the best way to create a seamless integration of oak and wine."

The smaller chips also can be used to tweak flavors before bottling. "Immersion bags filled with dominoes of different toasts can 'kiss' the wine as a final adjustment," says Weyna of Canadell.

Other suppliers of alternatives include Oak Solutions, with its full line of evOak products.

Liquid tannins

A final form of addition, liquid oak tannin, is not billed as an alternative to barrels. "You can use liquid oak tannin concentrate as an instant adjustment to a blend," says Bernard Pradel of Toasted Oak.

"We have been making the three major flavor components of oak available in all types of alternatives—chips, staves, cubes, etc.—and we introduced the liquid oak tannin concentrate with those individual barrel profiles five years ago. The biggest advantage is for the winemaker to be able to make easy adjustments during fermentation, and the results have shown that the already aged soft oak tannins integrate instantly to the natural existing tannin anthocyanin and pro-anthocyanin for color and softening at a cost comparable to chips with better structure and mouthfeel."

Liquid Oak Tannin Concentrate is produced by Toasted Oak Co. at a distillery in Cognac. It contains only water and tannins from French oak.

Another supplier of liquid oak tannins is Sistemas Naturales Internacionales S.L. in La Rioja, Spain. It makes Sinatin 17, which is based on alcohol.

Toasted Oak's Liquid Oak Tannin Concentrate comes in various flavors:

- Fruit Enhancer is a concentrate with 80 gm of tannin/liter. It is said to have a softening, rounding, aging effect on red and white wines.
- Vanilla comes from a different toasting method at 80 gm tannin/liter. This is a dense concentration of the vanillin present in oak.

- Mocha has only 10 gm of tannin/liter of concentrate. It provides the character of a heavy toast barrel and chocolate.

Harvest Tannin is made from aged and fresh oak. Its purpose is similar to the powder form of fermentation tannin. It is said to bring structure, preserve color and cover most vegetative character.

Doug Manning of Beverage Supply Group, which sells the concentrate in the U.S., says, “It has found tremendous success at the largest wineries.” He notes that it is approved by the FDA and TTB.

An alternative to liquid tannins is concentrated powder such as Oak Solutions Group’s Tru/Tan, blends of water-soluble tannins including gallotannins and ellagic tannins. They come in versions for fermentation, aging and finishing.

Suggestions to winemakers

Rick DeFerrari of Oregon Barrel Works is one of many suppliers who warn winemakers to take it easy. “The extraction rates of barrel alternatives are higher than barrels, and depending on the size, much quicker. My advice is to start with a low dose, maybe even a bench trial. Also match the size of the alternative to the exposure time: As a general rule, the larger the alternative the slower the extraction.”

Attila C. Gross of Quercus Concepts Inc.-Trust International Corp. concurs, “Add less and monitor. You can always add more. Be patient for optimal integration, especially on larger format alternatives.”

It’s easy to overdo oak additions—particularly the powder. Phil Burton of Barrel Builders warns, “Delicate wines can easily be hammered by adjuncts. It’s easy to overdo the oak. Go easy, even when used for color and stabilization during fermentation. Start slowly; you can always add more next week.” But he notes that you can let the oak get a little strong because it will tend to back off after the wine is bottled.”

Scott Harrop says, “Generally speaking, the smaller the oak pieces, the higher the total end grain exposed to the wine. So chips will have aromatic effect in a shorter time period than squares, and so on. However, if you’ve got enough time, larger stave products provide better flavor uptake and tannin integration.”

Reyna reminds winemakers, “The quality of the wood has increased, but more focus should be put on the wood itself.” Other suppliers agree that not all the wood is of highest quality, and it’s difficult to trace origins and provenance.

And even suppliers of both alternatives and barrels agree on one point: Barrels are better. Harrop of Cork Supply Group says, “For the finest wines, alternatives will never replace the finest barrels.”

Bernard Pradel, who supplies liquid tannins, admits, “Most barrels will have superior aging properties and impact on wines.” And Mähler-Besse of Radoux says simply, “Alternatives have made much progress, but you can’t get the same results as with barrels.”

The last word comes from Nadalie’s Abrial: “If you can afford a barrel, use a barrel. If not, it’s better to use oak alternatives than nothing. It makes a \$10 wine much better.”