

Here's What the Wildfires Mean for Your Glass of California Wine

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As some of the steps to maintain the quality of their wines and to avoid losing their harvest to fire, winemakers are adjusting how they plant vines and how their wineries are built.



By [Bridget Shirvell](#) October 05, 2021

When nearly 1,400 acres of [Somerston Estate](#) burned in Northern California's Hennessy Fire, Craig Becker, the vineyard's co-founder, general manager, and director of viticulture and [winemaking](#), decided not to harvest any fruit from the 2020 vintage due to [smoke damage](#). As the climate crisis intensifies, [experts expect that California wildfires will worsen](#), becoming a routine part of life in the state. Winemakers like Becker, Jesse Katz of [Aperture Cellars](#), and Zidanelia Arcidiacono of [Sonoma-Cutrer Vineyards](#), among others, have already added fire monitors to their winemaking tasks; carefully watching the fires and looking at smoke forecasts, all the while working to ensure the future of [California winemaking](#) and bringing incredible vintages to your glass.

"These fires are a drastic indication that climate change is here and will continue to get worse so we must be prepared," says Arcidiacono, the [pinot noir](#) winemaker at the Sonoma County-based Sonoma-Cutrer.

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Designing a Wildfire-Resistant Vineyard

[Climate change](#) and wildfires were top of mind when Katz and the Aperture Cellars team planted new wine vines over the past few years. Vines of grapes are seemingly everywhere at the Healdsburg-based winery, surrounding the winery and the hospitality space; while they look beautiful and produce award-winning wines, they're also a fire barrier. "Vineyards are about as good a firebreak as you can possibly have, the vines with their big green leafy material that holds lots of water will completely stop fire, so the vineyards are not only a key part of our identity but we're also making them an element of our fire safety," says winemaker Katz.

It's one of a number of wildfire adaptations Aperture Cellars has. They constructed the winery out of a custom pre-fab metal, which is more fire-resistant than other material options. They installed [generators](#) in case of power shut-offs, which can happen when the California utility company is attempting to prevent fires. They also outfitted the winery with

technology that allows Katz and the team to monitor the fermentation and complete pumping extractions—an essential part of the red winemaking process which draws out flavor, tannin, color, and more from the grape compounds—from off-site. "In 2019 we had the generator going, we had all the fruit harvested, and then the fires came in and we had to evacuate the winery with 27 tanks still fermenting. Although we were evacuated, I was able to do all the pump-overs and extractions from my dad's couch in San Francisco because we had installed a pump and computer at each tank," says Katz.



Credit: Courtesy of Aperture

How Wildfires Impact the Harvest

While winemaking is a year-round affair, the vineyards come alive during harvest season. "There is a buzz and feeling in the air of optimism for this upcoming harvest," Katz says. Depending on the grape, the harvest season can begin as early as August. It typically ends in October, coincidentally colliding with the wildfire season that historically stretched May through October, although recently has lasted well into December. Many things go into making the harvest decision; most of them focused on the composition of the grapes and

their flavor. And for some winemakers, wildfire season won't affect the timing of the harvest. "Imagine harvest like game seven of the World Series," says Becker, who says the wildfire season now often extends through the end of the year and frequently overlaps with harvest but that it doesn't affect when he picks grapes. "The bases are loaded, the score is tied, and there's only one millisecond where you can swing the bat to make that grand slam. Nothing you can do will change when that exact moment will occur, you can identify it and succeed, or you can miss it. Harvesting a great vintage of wine is the same way. You only have shot to get the timing of your picks right, and nothing you can do to."

For others, though, deciding when to harvest is now influenced by the fire threat. "Unfortunately, with the constant danger of fire close to harvest, many additional risk factors such as timing, proximity to the fire, wind trajectory, density and duration of smoke exposure need to be considered and evaluated when making the harvest pick decision," says Arcidiacono. "We work with the local fire department to review risk analysis and enhance our Fire Safety Preparedness."

Smoke Taint

While the actual vines as a natural fire defense, the biggest wildfire threat to California wines is smoke. The impact of smoke on vineyards and wines is difficult to predict. It's something winemakers, scientists, and wine drinkers are still trying to understand. "We continue to educate ourselves about it, as it is a situation that we will continue to be exposed to," says Arcidiacono. When grapes are exposed to smoke from a wildfire, it can influence the taste and quality of the wine. While no data shows that it can make us sick, smoke exposure and subtly affect the smell and taste of the wine so that the grapes can still be used to produce wine with some additional steps.

On the other end of the spectrum, the effects, which are commonly referred to as smoke taint, can be so impactful that it ruins the grapes; this was the case with Somerston Estate's 2020 vintage. There's no evidence, however, that smoke taint on a 2020 vintage would have any impact on the following year's vintage. Vines pick up smoke through leaves or the exterior of the berry, not through the vines themselves. "The fruit we are seeing this year is looking good," says Becker.

Smoke damage is something that winemakers pay close attention to these days. Katz and the Aperture Cellars team have done a lot of research over the past few years. They've found that when there is a fire, the impact, if any, on the fruit depends on several factors, including the proximity of the fire and how long the smoke has been traveling. "How fresh the smoke is has a massive effect on how that crop is affected," says Katz. "What we have found is that the amount of detrimental phenols that cause smoke to affect wines is in massive amounts of concentration within the first 24 hours. After 24 hours of being burned, those detrimental phenols drop off pretty quickly. So, if a fire burns and smoke goes instantly into your

vineyard there's a high potential of having smoke affect but if the smoke burns and has a long time of traveling around before it gets into the certain areas of the vineyard it's much less detrimental."

Many winemakers have and continue to test grapes and wine, looking for the levels of chemical compounds of smoke to determine the impact of the fires. So far, they haven't detected a negative effect on post-harvest production, but it's become another part of their winemaking process.

Despite the fires, most California winemakers are hopeful about the 2021 vintages and beyond. They see vineyards as a vital part of making California more fire-resistant. "We've seen incredible progress in our vines thus far and are expecting a fantastic vintage in 2021. As the 2021 harvest is underway, and my team and I can say that our core mission, our multi-decade vision, and commitment to sustainability truly are stronger than ever," says Becker.