

A Scientific Case for ‘Fingerprinting’ Terroir in a California AVA

BY STACY BRISCOE



George Rose/Getty Images

For 30 years, members of the Russian River Valley Winegrowers Association (RRVWA) have attempted to quantify and qualify the different Pinot Noir profiles their American Viticultural Area (AVA) produces. Through group tastings, the RRVWA discovered six “neighborhoods” that produce unique expressions of the AVA’s most popular red wine: Middle Reach, Santa Rosa Plains, Laguna Ridge, Green Valley, Sebastopol Hills and Eastern Ridge.

“As a group, we identified how much red fruit, spice, earth, floral notes we tasted, and homed in on key characteristics of each neighborhood,” says Mike Sullivan, co-owner and winemaker at Benovia Winery, in the Russian River Valley, and current RRVWA president. The problem, he notes, is that sensory science is difficult without qualitative methodology.

In 2015, Dr. Roger Boulton, emeritus distinguished professor of enology and chemical engineering at University of California, Davis, (UC Davis) approached the RRVWA with the opportunity to confirm their sensory hypotheses with scientific analyses.

UC Davis had recently acquired equipment that analyzes the elemental makeup of wine. “We suggested that if we could get samples of new wines from various members ... we could perform comprehensive elemental analysis,” says Boulton.

He collected samples collected of unfinished, single-vineyard Pinot Noirs that just completed fermentation in neutral vessels. “It was essential to get the wines before they had been aged, blended and bottled.”

Results showed how elemental compositions of wines from the same zone are so distinct that one can trace a wine’s origin to a specific Russian River Valley neighborhood based on its elemental “fingerprint.”

The key is soil to root interface, Boulton explains. “This is the basis of site significance,” he says, noting differences in rootstock, root depth or vine age weren’t a factor. “Otherwise we would not be seeing such a classification by site and soil elements.”

External factors like winemaking technique were less significant, Boulton says. “They do not seem to be of major importance in these wines or, again, we would not see such a clear classification based on vineyard site.”

In 2017, the RRVWA and UC Davis repeated the experiment.

“This time, I strategically selected vineyards in each neighborhood that were geographically different,” says Sullivan. He submitted five samples: one from the North, South, East, West extremes, and one from the exact center of all four neighborhoods.

The 2017 experiment confirmed the 2015 findings, says Sullivan. Again, there were no matching rootstocks, clones or specific winemaking methods put in place. “I figure with more variables at play, any similarities found would just further prove the point.”

However, Boulton believes there is no correlation between these elemental fingerprints and sensory impact components. “Most volatiles and flavor molecules are organic in nature, made up of mostly carbon, oxygen and hydrogen—not elements at the basis of these neighborhood classifications,” he says.

Members of the RRVWA still feel validated, though, because there is now scientific evidence confirming the neighborhood distinctions they discovered through independent study.

“It’s a verification of what we’ve been tasting, talking and thinking about,” says Anthony Beckman, winemaker at Balletto Vineyards. “Soils are different; light, elevation, fog patterns are different—*of course* these wines are different.”

The fog plays a sizable role in Russian River Valley wines, affecting how the grapes retain acid and ripen on the vine, as well as how the finished wines smell and taste. “Russian River Valley is such a foggy area, and that’s what dictates so much of the climate: the density of fog, length of morning fog and how early it blows back in the evening,” says Mari Jones, president at [Emeritus Vineyards](#).

Despite the uniqueness of each neighborhood, all RRVWA members interviewed stated that currently, there aren’t any plans to apply the individual locations for official AVA status. “What we want to do by dissecting the AVA is showcase the diversity of Pinot Noir style we have,” says Jones.

According to Boulton, there’s never been another experiment that distinguishes the differences between wines within a single AVA. The research conducted by UC Davis not only showcases regional diversity, it also proves the authenticity and fingerprint value to validating the vineyard site and grape origin of a wine. It makes a solid case for legitimizing the concept of [terroir](#).



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Wine Industry Job Fair Devoted to Diversity, Equity and Inclusion Launches

BY [WINE ENTHUSIAST](#)



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A new initiative aims to create more equitable hiring processes and sustainable careers in the wine business. Be the Change is billed as the first-ever virtual job fair to prioritize diversity and inclusion. The two-day event will be held December 2-3, 2020.

“As a Black queer woman, I am no stranger to being a token to meet an employer’s bottom line. Because of this experience, I became a DEI professional,” Lia Jones, founder and executive director of Diversity in Wine & Spirits, and co-founder of Be the Change, said in a press release. “What makes this initiative unique is our vetting process of the employers to address the need for safe spaces for a diverse workplace.”

Be the Change is helmed by Jones; Rania Zayyat, founder and president, Wonder Women of Wine; Cara Bertrone, national accounts sales manager, Folio Fine Wine Partners; and Philana Bouvier, vice president of fine wine, Republic National Distributing Company, and chair, WSWA Women’s Leadership Council.

In addition to a virtual job fair for up to 1,000 jobseekers, Be the Change will host a roundtable discussion on diversity, equity and inclusion in hospitality. It will be moderated by Bouvier and feature Jones as well as Dr. Hoby Wedler, sensory innovation director, Sensepoint Design; Bobby Stuckey, MS, partner, Frasca Food and Wine; Stephanie Gallo, CMO, E. & J. Gallo; and Susana Balbo, founder and winemaker, Susana Balbo Wines.

“I immediately saw the negative effect that COVID 19 would have on employment and diversity,” Bouvier said in a release. “We are going to implement change in multiple industries and it begins with wine, tech and legislation.”

In 2021, Be the Change plans to lobby for legislation regarding diversity, equity and inclusion. It will also host a second employment event in March 2021.

Employers can register for the December job fair starting November 2.



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