A GROUP OF EXPERIENCED, highly skilled and respected winemakers recently provided insights on their practices and processes used in wine blending to achieve style goals while working with vintage variability. These insights, along with tastings of wine samples to illustrate blending components and styles, were presented at the one-day seminar in March at the University of California, Davis, “Blending for Style,” a part of the Department of Viticulture and Enology’s Wine Flavor 101 series of educational meetings.

Wine Blending for Style and Quality
UC Davis seminar provides insights for creating and assembling blends to achieve style and market goals

Ted Rieger

Blending to Enhance Varietal Cabernet
Celia Welch, owner/winemaker at Corra Wines and with Celia Welch Consulting, specializes in ultra-premium Napa Valley Cabernet Sauvignon production. With a focus on blending to enhance varietal character, Welch said, “My challenge is to make Cabernet Sauvignon wines that are varietally correct and complex without using other varieties.” While noting that California winemakers have the option to blend and label varietal wines with just 75 percent of the stated grape variety, she observed, “The 25 percent blending ability we have can completely change varietal character. So where do you draw the line?”

Based on her experiences working with smaller estate producers, she suggested ways to work with vineyards to produce more complex estate or vineyard-designated Cabernets when facing geographical and grape sourcing limitations:

- **Rootstocks**: “Plant a variety of rootstocks and harvest separately by location or rootstock to provide another blending facet.”

- **Clonal selection**: “Clones can give different expressions of the site if you have only one piece of ground or soil to work with. As you develop or redevelop a vineyard, clonal selection is vital but be sure the clone and site are carefully matched.”

- **Irrigation**: “We turned off the water completely in one part of the vineyard, and we didn’t lose anything in chemistry or yield, but we had a different type of wine to work with at zero cost.”

Decisions that define separate lots are carried through fermentation and the wine process. Welch suggests beginning evaluation of lots after fermentation for initial differences, noting that some will have more residual sugar. She advised, “Keep a spreadsheet with meticulous notes on the characteristics of each lot.”

She begins piecing together similar and preferred lots during the spring following the vintage. Then in July and August, she aims to put together 75 percent of the lots selected for reserve wines. An advantage to piecing together wines early is that it simplifies logistics for the cellar staff, but this should not be the main reason for doing so. After the next harvest, Welch begins piecing together the other lots, and the final blends are usually assembled in January.

Regarding cooperage she said: “Slower release barrels are the ones I usually like best. I want to use the best barrels I like from one vintage for the next vintage, and I select the barrels I like best within each particular cooperage.” She also observed: “I’m constantly surprised how much better marginal lots can get by time in barrel. Piecing together these can give a complexity and fullness of the palate that you may want in the final blend. The deeper you can delve into all these kinds of details, the more interesting the results you can get.”

She advised that wine tasting panels who make blending decisions should not evaluate more than 40 lots at a sitting, and the whole team should have an easy-to-use rating scale. Knowing when you hit the right blend can be tested over the course of several blind tastings with the tasting panel. “The best ones generally get rated as the top ones repeatedly,” Welch said. She believes using 95 percent of production in a given year is a very good outcome. She considers 90 percent to be a good average, but in challenging years, 80 percent may be more likely.

Experience and diversity of experience with different wineries and appellations will help develop blending styles and decision-making ability. She advised younger winemakers to get experience working with different winemakers with a wide range of palates to learn about a range of styles and techniques. Welch summarized: “Blending is the part of winemaking that is the most magical. It’s part of the fun of working in the ‘kitchen’ of the winery.”

Blending to Represent Time and Place
Michael Silacci, winemaker at Opus One in Napa Valley, said, “We are trying to capture the essence of time and the sense of place with every vintage we make. The sense of place comes through strongly in the wine’s mouthfeel, and there’s a consistency among Opus wines in mouthfeel based on place.”

He noted that different ripeness at harvest reflects time and the vintage season. For example, defining ripeness in 2011 (a cooler, wetter year) is very different from ripeness in 2015 (with lower rainfall and warmer temperatures). He also explained: “If we’re making wines of time and place, time [and timing] is of the essence. This means dropping fruit at the right time, cultivating at the right time and making sure the right equipment and people are ready at the right time for the necessary vineyard and winery operations.”
Some blending and style practices begin in the vineyard. “At Opus, we farm as if we’re making vineyard-designated wines, but we’re making a proprietary blend,” Silacci said. This results in blending vineyard blocks and blending varieties. Vineyards are planted with 80 percent Cabernet Sauvignon and smaller percentages of Bordeaux varieties Cabernet Franc, Malbec, Merlot and Petit Verdot. Experience with the vineyards has led to practices, such as co-fermenting certain lots of Cabernet Sauvignon from different blocks and co-fermenting certain lots of Cabernet Sauvignon with Petit Verdot. The winery has also isolated three wild yeasts from the vineyard that are used to ferment more than one-third of the juice during production.

The use of different clones is important for blending at Opus, and Silacci said they provide nuance to the wine. Wine samples were tasted from three individual Cabernet Sauvignon clones the winery works with extensively—clone 4 and ENTAV-INRA clones 169 and 338—that individually showed different aroma/flavor characteristics and intensities for tannin, acidity, pyrazine and fruit.

Silacci said the winery approaches blending from both directions, making one blend of everything and smaller blends of two or more components, with a goal of these two methods meeting at some point. The “kitchen sink” blend of everything from the 2014 vintage was tasted and preferred by most seminar participants among the three blends tasted.

Silacci said the first blend is used to decide what label or tier the wine lots will be used for. With the second blend, decisions are made on what barrels and cooper’s are used. “Coopers are an important blending component, and we consider cooper’s as members of our team,” Silacci said. The final blend includes the blending of all selected lots and cooper’s for the wine tiers and labels.

Silacci emphasized the importance of people, including people who have worked with the operation and with each other for a while, in producing wines with depth and a sense of place. “Putting together teams of people [to plan, manage and make decisions] is essential to the success of the winery and the vintage,” he said. “I think 80 percent of wine quality comes from the vineyard, but the human factor ties all the factors of terroir together.” The goal is to always make the decision that is best for the wine.

**Blending Across Yeast Strains**

**Tom Stutz**, winemaker at Sonoma County-based *La Rochelle Wines*, discussed his use of indigenous yeasts and multiple commercial yeast inoculants in the production of multiple lots of Pinot Noir to provide a range of characteristics for blending. “The main contributions I’m looking for from yeasts are aromatics and mouthfeel,” Stutz said. “We want a wine with a seamless integration in the mouth that persists across the palate,” he added.

The winery sources Pinot Noir from high-end California growers, ranging from Anderson Valley in the north to the Santa Lucia Highlands in the south, and seeks grapes produced from two or more clones from each site.

Stutz said, “I use as many fermenters as I can get in order to produce individually fermented lots to increase yeast complexity.” This includes using 4-foot by 4-foot plastic Macrobins for multiple small fermentations. Crushed grapes go through a cold soak, and no SO₂ is added until after malolactic fermentation is completed. “I feel we get the benefits of wild yeasts early in the fermentation with no SO₂ during cold soak,” Stutz said.

Based on years of experience and experimentation he said, “We use a dozen different cultured yeast strains a year that I can use to tweak things in the grapes to accentuate desired characteristics.” In some cases the cultured yeasts are matched to certain clones.
Unlike some winemakers, Stutz uses press wine lots rather than keeping them separate from blends. He said, “I like the extra dimension press wine gives; it’s not obtrusive, and it provides great aging potential.”

Wines were tasted to compare differences in lots fermented separately with three different cultured yeasts that showed the following characteristics: Fermirouge—more fruit intensity, richness; Montrachet—cherry, good structure, more tannin; and Yeast 3001 (isolated from Côte de Nuits in Burgundy)—brighter fruit and acidity.

Creating a New Blended Wine

Neil Bernardi, vice president of winemaking with Duckhorn Wine Company, talked about Duckhorn’s business model of creating new blended wine brands and styles from scratch and how these develop over time. Duckhorn Napa Valley Merlot was the first wine made from the 1978 vintage and primarily from one vineyard. As the brand grew, grape sourcing changed significantly. The 2012 Napa Valley Merlot was produced from 46 different blocks from eight different AVAs and with just 25 percent estate-grown fruit from seven estate Napa Valley vineyards. Bernardi said, “Diverse sourcing drives consistency in style.”

Additional brands with waterfowl themes and labels were created to highlight certain wine varietals or styles from specific appellations, such as Goldeneye for Anderson Valley Pinot Noir, Decoy for Sonoma County varietal wines and Red Blends, and Canvasback for Red Mountain (Washington) Cabernet Sauvignon. Each of these brands has its own winery, winemaker and focus, and each brand has from one to seven wholesale wines and from 10 to 14 direct-to-consumer wines. “We’ve chosen to grow by creating new brands and new wines within brands,” Bernardi said.

To increase the chance of success when developing a new blended wine, he advised: “Buy or grow more supply than you need. This is expensive insurance, but you can plan for excess.” He advised talking to neighbors where the grapes are sourced and using the shotgun approach to help manage for variability, both in grape sourcing and in winemaking, to develop a style.

Determining economic and market goals and the target consumer is part of the development process. Economic factors include determining the cost of goods sold: the cost of grapes, overhead, production (equipment, supplies and aging cycle) and packaging. “You have to align your production goals with your sales staff’s goals,” Bernardi advised.

He focused on the Migration brand he helped plan and create for Russian River Valley Chardonnay and Pinot Noir. Migration Chardonnay was developed over eight years of experimentation before the first wine was bottled. Since Chardonnay has a broad range of possible styles, tasting a broad range of competitors’ wines provided an understanding of the breadth of styles and possible directions. Bernardi advised, “Understand style parameters and how grape-sourcing and winemaking techniques correlate to the stylistic direction.” Describing Migration’s style goal he said, “We wanted to be the knife edge between diacetyl/buttery-style wines and drier, less-oaked wines.”

Some winemaking techniques included the use of 30 percent new oak (medium toast) to balance fruit and oak. Originally, 12 Burgundian coopers were tried; now six are used. Harvest Brix levels started at 24 degrees but now range from 22.5 to 23.5 degrees. Fermentation vessels made a big difference, and many types and sizes were tried (new and aged barrels, stainless steel,
concrete, larger wood cooperage, etc.), and these changed during the process. “There are a lot of things and techniques to look at in dialing in your style,” Bernardi said. In using the shotgun approach, he advised, “Identify a manageable set of variables to explore then follow through but also be flexible.”

Winemakers for each brand present their final blend candidates to a larger group within the company to evaluate, which includes people from sales, marketing and finance. “Obtaining perspectives through different types of palates helps remove outliers from the process,” Bernardi said.

Bernardi concluded with these tips:

• When creating a blended wine, the planning process is critical for putting yourself in a good position for success. This creates the framework for the final blend.

• Aligning concept, style, sourcing strategy, winemaking technique, sales plan and cost of goods sold with goals equals success.

• The planning process is iterative. Every blended wine evolves over time, as should sourcing and technique, within the concept of larger style goals.

Blending to Enhance Popular Wine Styles

Charles Peterson of E&J Gallo Wines discussed how the company blends wines to match popular price points ranging from $3 to $14 per bottle, along with blending to match styles for current trends and consumer demographics. Using the resources of Gallo’s well-developed marketing and consumer analysis department to identify and understand wine drinker taste preferences in relation to demographics and price, the company has developed wine style guides to provide production consistency. He summarized, “We’re making different wine styles for different people at different price points.”

Styles are sometimes determined by trends, like unoaked Chardonnay and Red Blends. Other factors that determine, or redefine styles, are based on what occasions, locations and times of year wine drinkers will buy and use certain wines. Gallo can tailor wine styles to these situations by using the wide range of brands and price points it produces, based on packaging type and size (glass bottles, bag-in-box, etc.).

Some key points:

• Wine styles are a guide and help winemakers make a consistent wine from vintage to vintage.

• Winemakers have a lot of tools, including different varieties they can blend with.

• Gallo’s popular Barefoot brand is a non-vintage wine, which allows even more blending flexibility.

As an example, Peterson observed, “Pinot Grigio has been very successful for us, and we differentiate it from drier-style Italian Pinot Grigios.” Gallo uses varieties, such as Symphony, Muscat, Viognier and Gewürztraminer, for blending to enhance aromatics, tropical and floral characters in its varietal Pinot Grigio that are not found in traditional Pinot Grigios.

Typical varieties used for red wine blending are Touriga Nacional, Alicante Bouschet, Petit Verdot and Petite Sirah.

He discussed the importance of sweetness and acid balance in a blend, using Pinot Noir as an example. Gallo’s desired wine style characteristics for Pinot Noir are aromas of cherry and strawberry jam, and mouthfeel with some astringency and mouth roughness. To adjust/add sweetness, Gallo uses grape concentrate or Pinot Noir with residual sugar. He cautioned about using too much grape concentrate as it can easily add too much sweetness and overripe character. Tartaric acid is used for acid adjustment. Peterson advised, “Don’t wait until blending for acid adjustment, if you know it’s needed; start adjusting at crush.” He said it’s important to manage acid balance with Central Valley grapes, and Central Valley Pinot Noir can be a challenge. The goal is to balance the desired fruit aroma attributes with tartness and mouthfeel.
Blending to Achieve and Maintain a House Style

Rob Davis, winemaker at Jordan Vineyard & Winery in Sonoma County, discussed the development and evolution of Jordan’s house style of Chardonnay, first produced in 1979. Davis and Jordan’s original consulting enologist, Andre Tchelistcheff, worked together and traveled to Burgundy to taste and craft wines with a crisp and elegant style. Jordan Chardonnay is inspired by wines of the Côte de Beaune, notably Meursault and Puligny-Montrachet.

Davis said the primary decisions that affect style are vineyard selection; harvest decisions; and winemaking decisions at the hopper, at press, during fermentation and with cooperage.

Jordan focuses on vineyard sites in the Russian River Valley with well-drained soils and cooler climate. The winery uses newer technologies to evaluate and monitor site conditions and soils (soil chemical and profile analysis, electrical conductivity measurements) and vine vigor (Normalized Difference Vegetative Index) to define and manage uniformity, or lack of uniformity, in the vineyard.

Two important Chardonnay clones used are Dijon clone 76 with fruit intensity of Fuji apple, lower yields and smaller clusters; and Clone 17 (Robert Young) with green apple, pear and quince fruit character, small to medium clusters and light phenolic extraction.

To determine optimum harvest time, cluster sampling involves picking one cluster every 10 vines every 10 rows, and chemical analysis for Brix, total acidity and pH. Sensory analysis is also done to evaluate fruit concentration, maturity and balance. “Under-cropping is worse than over-cropping,” Davis said. Harvest is usually at 23° to 23.5° Brix to highlight Fuji apple character. Davis believes in night harvest by hand to maximize fruit expression and minimize phenolic extraction.

Fruit is sorted at the hopper and whole cluster-pressed to reduce phenolics. The juice is separated into at least three lots at the hopper/press stage based on tasting of samples. Juice fining is done based on the phenolic character of each lot and any possible Botrytis, using bentonite and caseine as needed after pressing. He advised, “Whatever you do to your wine, do it early in the process.”

He said, “Barrels are important, but fruit intensity is most important. We want lightly scented oak that integrates with the fruit.” About 40 percent of the juice is barrel-fermented in 100 percent new French oak from the Vosges and Troncais regions with medium toast. The wines go through batonnage for four months. Malolactic fermentation is limited to 18 percent of the blend to add to the wine’s mid-palate.

Davis said 85 percent of the wine goes to the restaurant market, where a food-friendly style is desired over the buttery, California style. He noted that this Chardonnay shows great at the table with food (as designed) but generally does not show well alone at wine judgments. WBM