

True to His Roots

WB winebusiness.com/news

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June 04, 2021



Philippe Melka, photo by Mariana Calderon

Philippe Melka began his search for the essence of the vineyards that he cultivates three decades ago. He launched his journey from the University of Bordeaux where he studied agronomy, enology and geology, then explored how soil shaped the character of Château Haut-Brion, Chattering Estate, Badia a Coltibuono, Dominus Estate and Château Pétrus varietals and blends.

“From the beginning, I felt connected to the earth,” Melka says. “I was fascinated by the fact that soil type had such a direct influence on wine style.”

Melka apprenticed for vineyard managers and winemakers in Australia, France and Italy before he returned to Dominus Estate in 1994. The winery hired him to evaluate the soil, but he soon discovered that Napa Valley wines were missing a sense of place.

A winemaker who values the vineyard as much as the winery, he has helped Napa Valley vintners establish vineyards that have yielded authentic expressions of each vintage since 1995.

“Vineyard managers have elevated quality,” Melka says, “by applying science to the planting and caring for each varietal.” They have transformed the landscape from vineyards where they flooded vines with water, fertilizer and pesticides to a marketplace where sommeliers tout the virtues of a single vineyard block.

Original Intent

“Before planting a vineyard,” Melka says, “I dig a soil pit, identify soil strata and evaluate key factors like structure, texture and depth.”

But as he learned firsthand, terroir amounts to more than the physical properties of the soil. It also accounts for geography, climate and choices that a vineyard manager makes about where and what to plant, and how to tend the vineyard.

For Melka – geologist, vineyard manager and winemaker – the lay-of-the-land helps shape the character of a vineyard. Hillside vineyards can yield full-bodied, yet elegant cabernet sauvignon from porous soil hundreds of feet above sea level.

“The structure, texture and depth of soil [from hillside vineyards] vary from site to site,” he says. “In general, the soil is rocky and depending on the location contains fragments of volcanic rock.”

Alluvial plains help define Napa Valley terroir, too. Vineyards straddling the Rutherford Bench can deliver cabernet sauvignon that is refined, yet full of complex aromas and flavors from alluvial soil nearer to the valley floor. A blend of clay, gravel, sand and silt, alluvium holds water in its upper layers during the growing season, then dries out as the grapes mature.

“For valley floor sites, we look for a water table that’s deep enough not to compromise the root system,” he explains. Ideally, the soil drains well, contains balanced concentrations of calcium, potassium and magnesium and ranges from slightly acidic to slightly alkaline.

Elevation matters

“We look for a site that’s 600 to 1,200 feet above sea level,” Melka says. “It creates a wine with great structure and density without rustic tannins.” At higher elevations, wind, temperature inversions, a greater concentration of UV light and rocky, porous, less fertile soil can sap vigor from the vines.

But geography is only part of the story.

Variations in climate help explain the breadth of the valley and its most widely planted variety.

Local temperatures drive budburst, bloom and most importantly ripening. Cooler summers and temperate autumns extend the vintage, lengthening hangtime and delaying harvest.

During the growing season, hillsides can be 10 to 15 °F cooler than the valley. Lower ambient temperatures and narrower diurnal variations yield fruit that delivers balanced, complex, nuanced wine.

Higher ambient temperatures and wider diurnal ranges along the valley floor build character. Warmer daytime temperatures promise ripe berries. Cooler nights help grapes retain acidity. Together, they deliver robust fruit and the prospect of vintage cabernet sauvignon that’s crisp, balanced and approachable at a younger age.

Miles of Aisles

Today, Melka oversees an 11-acre vineyard in Saint Helena and a 25-acre vineyard at the Sonoma – Napa Valley border. As a vineyard manager, he must strike the perfect balance between temperature, sunlight, shade and airflow around each cluster of grapes.

“Listen closely enough,” he says, “and you can hear the vines talk.” At the same time, the sensors that he has placed in the vineyard let him know exactly what the vines are saying.

Wireless sensors measure sap flow, then pass it along to a computer that calculates the transpiration rate, gathers data from weather stations and stores information that Melka can access with a personal computer. From there, he can evaluate the health of the vineyard by analyzing the charts and tables that the weather stations and sensors update instantly.

“In general, we want to create moderate stress for the vines to elevate grape quality,” he says.

Restricting the flow of water once the vines begin to flower, limits growth. Unchecked – dense, crowded canopies block sunlight, reducing aromas, flavors, phenolic compounds and varietal character.

“We’ve shaped around 80 percent of the vineyards we manage into vertical canopies with cross arms,” he says. “This ensures that the canopy is wide enough [to direct] sunlight and airflow and helps us better position the clusters.”

By removing leaves to expose each cluster to half of the sunlight, the vineyard team increases the concentration of precursor compounds that yeast, bacteria and winemakers can convert into aromas and flavors.

“We drop fruit to create the perfect balance between the canopy and the grapes,” he says. But yield alone does not determine quality. Vines produce premium grapes when soil, moisture, sunlight and choices about what, where and how to cultivate the grapes align crop load with the size of the canopy.

Best laid plans

“In the past, we planted vineyards with a large space between vines,” Melka says. “Our approach has changed. With much narrower spacing, we can hang less fruit [per vine] because there are more vines per acre.”

Five –by– 3 foot spacing, for example, is three times as dense as conventionally planted vineyards. With closely spaced rows, the vines compete for moisture and nutrients. Typically, they outperform less densely planted vineyards.

“I like to recommend a variety of clones for the same site,” he adds. “The only bad combination of rootstock and clone would be a vigorous rootstock like 1103P matched with a low yielding selection like clone 6.”

Exposure helps determine the location of hillside vineyards. In the Northern Hemisphere, a hillside vineyard facing south or southeast can absorb more heat and sunlight accelerating budbreak and ripening. With cooler daytime temperatures, a hillside vineyard facing north or northwest can benefit from a longer hangtime.

“Where the soil drains well, we focus on maintaining the natural contour of the landscape,” he says. Contour farming preserves topsoil, groundwater and nutrients by reducing runoff.

Variations on a theme

A world of experience hardly matters unless the vineyard and winery crews can produce a memorable bottle of wine.

“We are looking for a balance between acidity, alcohol and phenolic compounds that gives wine its structure,” Melka says.

Napa Valley cabernet sauvignon embodies the land, the variety and the sensibilities of the vintner. In essence, it expresses the unique aromas, flavors and texture of grapes shaped by their geography, microclimate and soil.

“The diversity between these sites is remarkable,” he says.

Napa Valley winemakers can create bold, yet elegant wine from grapes growing along the coastal range, wine that is refined, yet full of complex flavors and aromas from berries growing on the Rutherford Bench or crisp, balanced wine from grapes growing along the valley floor.

“A sense of place,” Melka asks? “It’s a reflection of the vineyard and the winery. It’s telling the truth about who you are.”