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**The Top Grapes Of Napa Valley Presentation: Educator Talking Points**

**General Outline**

* Introduction
* Why Napa Valley Produces Great Wine

**Six Key Grape Varieties of Napa Valley**

* Sauvignon blanc
* Chardonnay
* Pinot Noir
* Merlot
* Cabernet Sauvignon
* Zinfandel

**Topics covered for each grape variety**

**History**

* + Parentage
  + Native country/region
  + History/first plantings within California
  + History/first plantings within Napa Valley

**Importance in Napa Valley**

Acreage; price per ton; total value

(Optional Additional figures are provided)

**Defining Characteristics in the Vineyard**

**Defining Characteristics of the Grape/Wines**

**Typical Winemaking**

**Tasting Session**

* + Major Styles
  + You’d Know a Napa Valley [grape variety] Wine Blind By…
  + Napa Valley’s style versus other key regions’ wine styles from the variety

**Accompanying Documents**

Quiz: Multiple Choice/Matching/ True & False Questions

**Class Length**

One hour and a half (1 ½ hours) is the suggested length of a presentation, but this can be altered at the Educator’s will. The hour and a half presentation ideally includes a tasting of six (6) wines to represent the six grape varieties covered during the presentation.

**Timing of Wine Tasting**

The Educator is free to choose whether the wine tastings are done throughout the presentation, with each variety section of the presentation, or grouped together and tasted as a full set at the end of the presentation.

**What to Cover During the Tasting Session**

Please note that Educators are encouraged to cover these topics during the wine tasting:

* + Major Styles
  + “You would know [the variety] in a blind tasting by …..”
  + Napa Valley’s style versus other key regions’ wine style from the variety

Talking points on each of these topics are provided at the end of each Variety section in this document. However, as noted above, the Educator may choose to guide participants through a tasting of all wines at the end of the power point presentation.

**Power point Revisions**

The Educator will need to populate Tasting Session slides to include information on the wines being tasted during/following the presentation. The Educator is also encouraged to revise the slide deck as desired to aid or enhance his or her presentation.

**Quiz**

The quiz is encouraged to assess and provide a quantifiable acknowledgement of learning for the participants.

**Use of these Educator Talking Points**

* Points in **bold** are key points to cover
* Numerous other points are provided for optional/potential inclusion. It is up to each Educator to decide what to include.
* **Deep Dive** is a term used for further explanation of a point or an additional fact that may be of interest. Educators should assess the knowledge of the class at the outset to determine whether to take some of these deep dives. Deep Dives may also prove helpful in answering questions that may come up from class participants.

**Presentation**

**Introduction**

Image: Napa Valley Panorama

**General Talking Points**

* The first industry boom started to emerge by 1850: there were 50,000 grape vines in Napa Valley, which would grow to 200,000 by the end of the decade.
* Much of the vines were of the Mission grape [a vitis vinifera brought from Spain, and related to Argentina’s Criolla and Chile’s Pais grape].
* **The notion of Napa Valley creating some of the most respected wines of California started as early as 1861 with:**

1. **The planting of ‘foreign vinifera’ by pioneers such as George Belden Crane and fine wine made by Henry Pellet; as well as**
2. **Innovators such as Jacob Schram joining the spirited planting at the time and observing and choosing the best grapes for fine wine: Schram chose Zinfandel as a top red**

* Charles Krug is credited with establishing Napa Valley's first commercial winery in 1861.
* Gustave Niebaum, a Finnish fur trader, used his enormous wealth to import the best grapevines from Europe to Napa. In 1879 he established Inglenook, the first chateau-style winery in the US. He was also the first to sell wine in bottles.
* In 1884 Napa Valley surpassed LA County as the State’s leading producer of dry table wine.
* By 1886, Napa Valley had 175 wineries.
* At the 1889 Paris World’s Fair, Napa Valley’s wines captured 20 of the 34 medals awarded to California wines

Main Session Description

* **Today, there are more than 35 grape varieties flourishing in Napa Valley. Five red and two whites ONLY have greater than 1,000 planted acres each.**

**In our session today, we take a look at six of the top-planted grapes of the Napa Valley, exploring their historic and economic importance, their key characteristics, major wine styles and wine making techniques**.

**First, let’s take a look at why Napa Valley can produce some of the best wines in the world.**

**Why Napa Valley is one of the top wine capitals of the world**

Climate

* Napa Valley is located within the rare Mediterranean climate zone, which encompasses just 2% of the earth’s surface.

[Definition of Mediterranean climate: typified by warm, dry summers; mild, wet winters and low humidity; low annual temperature difference between the hottest and coldest months. Caused by planetary-scale air mass circulations.]

* The Mediterranean climate allows for warm, dry weather during the growing season, which:
  + reduces the risk of vineyard diseases, mold/rot
  + promotes a healthy crop of fruit
  + contributes to the consistency of vintages
  + reduces the risk of swelled berries and sugar dilution from rain at harvest
* Rain comes during the dormant winter months and replenishes the groundwater and reservoirs.
* Most areas of Napa Valley can dry farm or tightly manage their irrigation practices.
* The climate includes winter dormancy, important to the vine for conserving energy for the following growing season.

Long growing season

* The long growing season is ideal for wine grapes to ripen slowly and evenly, allowing for balance between sugar development and phenolic ripeness.

Diurnal Temperature Swing

* The large diurnal (day to night) temperature swing throughout the valley provides cooler evening temperatures. The change in temperature slows ripening and helps maintain acidity in the grapes.

Deep dive re diurnal temperature swing: If warm weather continues into the night, ripening continues which means that sugar development increases. As sugar increases, acidity decreases in the grapes. There is also the risk of full sugar ripeness before full flavor development and phenolic ripeness.

Deeper dive: Photosynthesis, the process whereby sunlight is used by chlorophyll-containing green plants to convert carbon dioxide and water into glucose (and oxygen), depends on temperature (and sunlight). Photosynthesis slows at temperatures less than 50 degrees Farenheit (as well as at high temperatures) so sugar development and ripeness are slowed.

Ocean Influence in General

* Ocean influence in general: large bodies of water change temperature slowly (more slowly than soil) and there is less temperature variation overall. Yet effects from the ocean mitigate the warmer Mediterranean climate: fog and breezes/winds.

Fog

* The proximity to the Pacific Ocean mitigates the climate with cooling effects from fog and breezes/winds. Much of the valley’s fog comes up through the San Pablo Bay at the southern end of the region.

Since photosynthesis relies on sunlight as well as temperature, when fog is present, photosynthesis is reduced. This slows sugar development, or ripening, which helps maintain acidity in the grapes.

Deep Dive on fog:

* + During the summer growing season, there is a recurring pattern of marine fog from the Pacific Ocean.
* As hot air in California’s interior valley rises, it creates a vacuum effect that draws in moist, cool air from the Pacific Ocean, forming fog.
* This pattern repeats most days during the warmer months of the year.
* Fog is more prevalent in the southern reaches of the Napa Valley where it comes up from the San Pablo Bay.
* Except on rare days, summer fog will burn-off by mid-morning in all areas of the valley.
* While fog can raise humidity, it is burned off by late morning so it is not harmful to the grapes.
* Gaps in the coastal mountain range also create further cooling opportunities as with the Petaluma Gap. The Petaluma Gap is a wind gap bringing in strong (20 plus miles per hour) winds from the Pacific towards the San Francisco Bay, which further cools the southern part of Napa Valley (particularly the Carneros region).
* Gaps in the valley’s western Mayacamas mountain range bring in cooling influences further up valley, as with the Chalk Hill Gap in Calistoga, which brings in breezes in the late afternoon and evening.

Low Humidity

Low humidity in the region is a plus. High humidity promotes growth of mold and fungus, which not only reduces the crop, but also creates the need for fungicides. The humidity from the Pacific Ocean that particularly influences the southern Carneros region provides welcomed moisture and is not extensive.

Elevation

The western Mayacamas and eastern Vaca mountain ranges provide various elevations up to 2,500 feet. Higher elevations provide for an even greater diurnal swing (helping to retain acidity in the grapes) and at the same time, sunlight is more intense well above sea level, encouraging photosynthesis. The generally cooler (and to varying degrees windier, rainier and less foggy) conditions at higher elevations provide for a variety of different flavors and phenolic development at different altitudes, allowing for greater complexity in the wines.

Diversity of Aspects

* Due to the slopes of the western Mayacamas and eastern Vaca mountain ranges, a diversity of sun aspects is available to winegrowers. In the northern hemisphere, a vineyard on a slope that faces south gets the most sun. Different aspects allow for different levels of ripening and flavors, giving wines blended from different vineyards a range of complex flavors.

Diversity of Soils

* Ideal soils for viticulture have relatively few nutrients, are well drained, but able to store enough water to support the vine during the growing season.
* Each soil type has varying capacities for water retention and drainage as well as nutrient uptake.
* With Napa Valley having a third of the world’s soil series (soil series are common groupings of soils), that means the vineyards have the benefits of different soil compositions.

Deep dive on nutrients: The most important plant nutrients include nitrogen, phosphorous and potassium that are dissolved in the water in the soil. Some are the result of decaying plant materials or manure; others are dissolved mineral salts. Vines do not need high levels of these nutrients to thrive. If levels are too high, especially of nitrogen, the vine will grow too vigorously and produce a dense leafy canopy that may shade the fruit too much.

Deeper dive on soils and wine flavor: While there is no proven scientific link between specific soils and the resulting tastes of a wine, the soil’s uptake of water and nutrients affect the character of a wine.

Deeper dive on soil particle composition: It is the size of the particles that is most important. Small particles such as with clay, allow for water retention, which helps sustain the vine during the drier summer months, as well as provide a cooler environment for the plant (which can delay budbreak—which may be preferred if there is frost risk). Larger particles like sand and gravel allow for drainage, keeping the vines’ roots dry and therefore less at risk for mold/rot during the rare wetter years, while also making the vines grow deep roots which are good for a strong foundation and for deeper water and nutrient reserves.

Deeper Dive on Napa soils:

* Much of Napa Valley’s soils were formed by the marine sediment and volcanic material that make up the Mayacamas Mountains and Vaca Range.
* Soils created by the runoff of a single creek from a hillside watershed are known as alluvial soils.
* Along the valley floor, pockets of alluvial soils exist.
* Alluvial soils spread out in a fan-like shape, when streams, running down from the mountains, become sediment-laden. This creates an area of distinct soil called an alluvial fan – examples of these formations include the Rutherford Bench and the Oakville Bench.
* Other soil can be made up of bedrock sediment from multiple watershed sources or from flooding - it is called fluvial soil. Fluvial soils are generally found around the Napa River.
* Alluvial and fluvial soils are generally deeper, more fertile, and hold more moisture than the thinner rocky soils covering hillsides and slopes.
* Soils can impart distinct character in wine grapes depending on their bedrock origin.
* Soil depth and fertility can also affect the character of wine grapes and the final wine.

Industry Leaders (NV attracts star power)

As one of the top wine capitals of the world, the Napa Valley attracts some of the brightest minds in the industry, constantly elevating the industry and keeping it innovative.

Innovation

The Napa Valley is not restricted by appellation regulations as in the EU. The industry can adjust quickly with new learning. (ie., Napa Valley was among the first to use NASA satellite technology during post-phylloxera replanting to map out best vineyard layouts.)

Science & Research

There are strong and historic ties between UC Davis- which has one of the world’s most respected Viticulture and Enology departments-and the Napa Valley wine community. There is a 40-acre UC Davis research station and experimental vineyard in Napa Valley, in the town of Oakville, allowing students to conduct research.

Side note: Strong Agriculture Labor Force: Abundant agricultural/farming workforce for vineyard care. This is not available in every region in the world.

* There is a strong Hispanic heritage in the Napa Valley today:
  + - * In 1942, facing a labor shortage brought on by World War II, the US and Mexico together created the “Bracero” program bringing guest laborers from south of the border to work in American agriculture.
      * Many of these laborers landed in the California and Napa Valley wine industries and, over time, become incredibly skilled in techniques related to premium grape growing.
      * Some went on to own their own vineyard management companies, while others have become Napa Valley vintners in their own right, moving from the vineyard to winemaking and winery ownership.

**Napa Valley Winegrowers : Nurture the Vines**

[photo: hands in the vineyard]

**When planting and farming a vineyard, a grower is able to use both time-tested farming methods and the latest technology out of UC Davis and other research universities.**

* Growers are able to use the latest rootstocks and clonal material to match the attributes of a particular vine to a specific vineyard.
  + Example: Drought-resistant rootstocks and clones on hillsides where water is most scarce, with rootstocks and clones most suited to plentiful water in valley floor vineyards.
* The vast majority of vineyards are hand farmed and harvested, allowing personal attention to be given to each vine.
* It’s not unheard of for each vine in a particular vineyard to be touched by a human hand up to 12 times in a single growing season.
  + Pruning, canopy management, leafing, dropping fruit and harvest; Farmers are able to adjust the yields of a vineyard according the natural vigor of the vineyard and the vines, thus creating a balanced vine.

**Bottom line: The combination of great soils, perfect climate, and a farmer’s attention to detail in the vineyard allows Napa Valley to produce wine grapes of the highest quality, and are tailored to the environment of the vineyard site and grape variety.**

**So how does terroir drive viticulture?** First, growers must seek to understand the character of the vineyard site; only then can the best viticultural practices be put into place.

Site Selection factors include the following, and all affect growing decisions:

* Topography
* Soil composition
* Drainage
* Sun exposure
* Microclimate conditions

These factors will inform Vitcultural Practices, such as:

* Vine material selection (rootstocks and clones)
* Soil management
* Irrigation techniques
* Trellising and canopy management

To help continuously improve grape-growing and winemaking, Napa Valley growers and winemakers harness the latest technology in the vineyard and winery.

Vineyard:

* Use of the latest clones and rootstock material
* Vineyard mapping using NASA satellite technology
* Grapevine monitoring to get real-time information on what’s going on within individual vines
  + Example: vine sensor technology from Fruition Sciences
* Vineyard weather stations helping farmers monitor and predict conditions in individual vineyard blocks, informing their farming decisions on things like irrigation
* Other research done at the UC Davis field station in Oakville

*Interesting Note*: During the late 1980s and early 1990s, phylloxera hit the area again, forcing vineyard owners to replant thousands of acres of vines. Despite being costly to the wine industry, it turned out to be a blessing in disguise. It allowed vineyard managers to rethink their farming practices before replanting vines using the latest technology. Now, 25 years later, vineyard managers are starting to replant the vineyards planted in the wake of phylloxera, giving them an opportunity

**Napa Valley Winemakers: Create Quality Wine**

[photo: hands/sorting machine]

**How do Napa Valley winemakers create quality wine?**

**It’s often said in almost any quality grape-growing region that “winemaking starts in the vineyard.” It’s the job of the winemaker to transform the high-quality fruit into world-class wine.** Inside the winery, most Napa Valley winemakers agree that “less is more” and their best approach is gentle and “hands off,” allowing the grapes to express themselves.

**This said, there are many things that winemakers do in the winery that create an environment where high-quality wines can be produced.**

* **Attention to detail**: Winemakers in the Napa Valley pay attention to even the smallest details of wine production to ensure that they are in control of the process every step of the way. Here are just a few examples of how winemakers pay attention to detail:
  + Small lot fermentations: Winemakers ferment grapes from individual vineyard blocks separately in small batches, thus continuing the attention to detail that began in the vineyard.
  + Daily evaluation: During fermentation, winemakers not only test the fermenting juice in the lab daily, they also taste through every lot to ensure that everything is proceeding as planned.
    - Winemaker Matt Crafton of Chateau Montelena describes winemaking as “it’s having the right people, the right equipment, the right support, in the right place, at the right time.” He goes to say that winemakers “invest significant amounts of time, money, and effort to make small, incremental improvements in their processes because they’re worth it.”
* **Winemakers use the best equipment and technology (including presses, crushers, de-stemmers, pumps, and tanks) to ensure gentle handling of the fruit and wine in the winery.** 
  + Many wines are fermented and/or aged in high-quality oak barrels to complement the fruit flavors in the wine. The use of oak is often related to a frame around a painting: it accents and compliments the work of art.
* **Constant evaluation**: Winemakers in the Napa Valley constantly evaluate their wines to ensure quality.
  + In addition to tasting wines daily during fermentation, winemakers taste and evaluate wines almost monthly throughout the aging process.
  + Have access to highly accurate (in-house or outsourced) chemical/biological analyses to constantly evaluate quality and provide data to aid in decision making.
  + Rely on their own knowledge and understanding of the science to make subtle adjustments to a wine based on what we’re tasting or the data we’re seeing.
  + Track everything and keep meticulous records.
  + In some places, we can have 40+ years of institutional knowledge in a single individual. The pioneers from the 1960s and 1970s are still here, still working the same ground in many cases, and offer an incredible amount of experience.
* **Experimentation**: Winemakers routinely conduct winemaking experiments and trials to figure out how they can push the quality envelope forward, including trying different yeast strains, fermentation vessels, new high-tech equipment, oak barrels from different cooperages, and myriad others.
* **A culture of collaboration**: Finally, the culture of collaboration in Napa Valley allows winemakers to constantly share knowledge and help each other improve wine quality.
  + Napa vintners regularly collaborate and participate in local wine technical group meetings and discussions, including the NVV’s winemaker discussion group.
  + They also regularly attend knowledge-building programs at local education institutions, like UC Davis, Sonoma State University, or even the local community college, which has an extensive enology program.
  + And, maybe most importantly, winemakers share knowledge in the thousands of informal interactions they have with each other sharing meals and drinks at local restaurants and other places around the valley.

**Sauvignon blanc**

**History**

Graphic:

Vine growth reflects the timeline of grape’s travel from old world to CA and specifically Napa Valley:

1. starting with roots (where it came from in the old world) to:
2. the date/time period it entered CA
3. the date/time period it arrived in Napa Valley

**Talking Points (most important in bold)**

Parentage/Siblings (Educator note: can be covered on introductory screen showing sauvignon blanc grapes, or on first history screen showing its native origins.)

* **Sauvignon blanc is a parent of cabernet sauvignon (along with cabernet franc)**
  + Optional or if asked: One of sauvignon blanc’s parents is thought to be Savagnin: an old variety from Northeast France and Southwest Germany.

Old World Roots

* **From the Loire Valley of France**
* From the French word for ‘sauvage’ meaning wild- because the shape of its leaves is similar to those of wild grapevines – not as many think, because of the grape’s wild aromas and flavors. Also called: Blanc Fumé.

CA

* **Charles Wetmore brought the grape to CA from Chateau d’Yquem**

Deeper dive: Livermore, CA growers Louis Mel and Charles Wetmore are responsible for bringing the grape to CA. Wetmore traveled to Europe to collect vines and went to Chateau d’Yquem with a letter of introduction from Mel, who had connections with the Marquis de Lur Saluces, owner of the Chateau.

If asked: Agoston Haraszthy imported Sauvignon blanc and Semillion (and many other varieties) in 1861 but the vines didn’t seem to leave Buena Vista according to historians.

Napa Valley

* Gustave Niebaum planted sauvignon blanc at Inglenook 1880s; Georges de LaTour chose sauvignon blanc as one of his imported whites when he got into the wine production side of the business in 1902. Beaulieu won gold awards for theirs in 1915 at an International expo in San Francisco.
* The Sauternes name was well known to European wine lovers and was the name (albeit without the final ‘s’) that was used on dry or sweet wines from the white Bordeaux varieties, which includes sauvignon blanc. H.W. Crabb pioneered good *Sauterne*, followed by Inglenook, Eshcol (now Trefethen), and Larkmead - until the 1960s when varietal designations took over.
* Used for jug wines or sweet wines mainly, until Robert Mondavi’s Fume Blanc.
* **The variety gained prominence when Robert Mondavi made a drier style in the late 1960s, calling it Fumé Blanc after the well-selling Pouilly-Fumé from France’s Loire Valley.**

Other notes of interest:

* After Repeal, plantings of sauvignon blanc exceeded those of Chardonnay in the State.

**Importance in Napa Valley**

Graphic:

Dashboard displaying the key acreage and related economic numbers

**Talking Points: [2015 Napa County Crop Report]**

* Second-most important white grape in Napa Valley
* 2, 801 total acreage in Napa County
* $2,012 price per ton in Napa County
* $22 MILLION total value in Napa County

Exact figure: $22,007,256 total value in Napa County (price per ton x tonnage)

**Additional Figures** (also 2015 Napa County Crop Report figures)

* 10, 938 tons

**Defining characteristics in the vineyard**

Graphic: Meter image with gradations indicating character strengths

**Talking Points:**

* **Late budding (advantage in areas with Spring frost risk)**
* Early to mid-ripener
* Small cluster, conical in shape, tightly packed with medium-sized berries
* **Adaptable/tolerant vine; grown in sites where cabernet sauvignon or the more sensitive chardonnay does not grow as well.**
* **Very vigorous; vine canopy needs to be controlled.**
* Prone to winter injury, which is not an issue in Napa Valley’s climate.
* The grape is sensitive to mildew and black rot, which is a low risk in Napa Valley’s dry climate.
* Typically grown throughout the valley
* Trend is for night picking so the fruit is brought into the cellar at a cool temperature. This helps keep delicate aromatics in the grapes and thus the wines.

Deeper Dive: **Since the sauvignon blanc vine is very vigorous, it takes a lot of work to keep the canopy and foliage under control**. Unrestrained growth or over-cropping will result in neutral tasting wines. It is best planted on low vigor rootstock in not-too-fertile soils, so the canopy does not get uncontrollable.

Deep dive on grape growing: Sauvignon blanc shoots grow upright which facilitates vertical shoot positioning trellises. Recommended trellising in Napa Valley for the vigorous sauvignon blanc vines are Geneva Double Curtain or a modified Lyre, especially when the variety is planted in deep, fertile soils.

Deep dive on vineyard training as related to flavor/style:

As Napa Valley sauvignon blanc winemaker, Kristin Belair of Honig Vineyard, explains, “Up through the early 1980s, sauvignon blanc was typically grown on California sprawl trellising and the fruit was heavily shaded. Sauvignon blanc that is heavily shaded produces wines that tend to be more on the vegetal (bell pepper, green bean, asparagus) side.” With more advanced trellising systems into the 80s, Napa Valley was led away from its overly herbal flavors and more towards citrus and tropical fruit.

Innovation note: Napa Valley sauvignon blanc winemaker, Kristin Belair of Honig Vineyard explains: sauvignon blanc ripens later than chardonnay but before cabernet sauvignon. Honig pre-prunes the sauvignon blanc vines in January, leaving longer shoots, and then conducts a second pruning later, after the threat from frost has diminished.

**Defining characteristics of the grape/wines**

**Graphic:**

Grape bunch: where intensity of structural components is viewed by increasing level of color gradation in the grape bunch. Grape bunch image is repeated for each structural component (ie aromatics, color/pigment, acid, tannins (the latter for red varieties only)

**Talking Points:**

* Pronounced aromatics
* Naturally high acidity (zesty, crisp whites)
* General aromas and flavors: grass-citrus-stone fruit-tropical flavors depending on site/how early grapes are picked. Can be managed in the vineyard.

**Sauvignon Blanc: Did you Know?**

**Pyrazines**

* Wines’ aromas and flavors are caused by many different compounds, and one group of those compounds – called Methoxypyrazine (shortened to Pyrazines) – causes the green bell pepper or vegetal aroma and taste that can sometimes be found in Sauvignon blanc.
* Researchers found the presence of pyrazines can be reduced or altered in the vineyard if a grower/winemaker desires. By controlling the leafy part of the vines (leaf pulling, pruning), this allows more sun and light on the grapes, increasing ripening and reducing green aromas and flavors.
* Warmer climates in general ripen the berries past the stage where pyrazines are a major flavor component.
* Pyrazines are a natural component of some grape varieties, and not every producer wants to minimize their affect. Pyrazines can add a complexity to the wine as well as being a signature flavor of the grape.

**Typical Winemaking**

Graphic:

Vessel images with reveal-able text re impact of vessel

**Talking Points:**

* Gentle pressing to minimize phenols in the skins

**Fermentation**

*Explain with Stainless Steel Tank Image:*

* Neutral vessels are often used (stainless steel tanks, stainless steel barrels, concrete tanks of various sizes including concrete eggs; neutral barrels), for fruit forward styles
* Neutral barrels with lees stirring is used for added richness and texture without oak influenced flavors

*Explain with Concrete Egg Image (also a version of a neutral vessel)*:

* Napa Valley winemakers have been experimenting with and using Concrete Eggs especially on their sauvignon blanc wines. These vessels produce a fresh and fruity style of wine. Their usage is a very small percentage of overall vessel use in the Napa Valley.

Deep Dive re Concrete eggs: Proponents of concrete eggs say the benefits are numerous. The concrete keeps a steady temperature during fermentation without the need for heating/ cooling coils. The egg shape in particular ensures there are no dead corners so there is better uniformity of the juice. The material that the concrete fermenters are made from is porous so the vessel breathes as wood does. This reduces off odors that can come when a wine has no air, and it also imparts a rounder, richer mouth feel in the wine. It does this without imparting oak flavors on the wine while maintaining fresh fruit flavors. Its detractors say they are hard to clean.

*Explain with Oak Barrel Image*:

* **Oak fermentation is chosen by many winemakers for integration of fruit and oak flavors**
* **Oak (new or previously used) is also used for aging sauvignon blanc wines for layered flavors and texture**
* The majority of Napa Valley sauvignon blancs are fermented dry. You will find a number of the wines having a small percentage of residual sugar
* The wines may be enhanced by MLF/partial MLF (for softer acids and a richer texture) but many winemakers avoid MLF for sauvignon blancs to retain fresh varietal aromatics and maintain acidity. [MLF can be avoided by using SO2)

Aging

* For the non-oaked sauvignon blanc style, the wines are typically bottled the year after harvest to showcase its fresh, fruity flavors.
* Oak aging is an option used by a number of Napa Valley winemakers: in new or newer oak barrels for added flavors and texture. Aging times vary from a couple of months to a year. Current oak use today is more subtle; oak-influenced flavors are well-integrated into the final wine.
* Typically bottled as a single variety or with small percentages of other white varieties such as Semillon.
* Other winemaking styles

Less typical but historically important are the late-harvest sweet wines and the very limited botrytis-affected wines produced in the Napa Valley.

* Skin contact

Today, some winemakers leave a portion of the grapes in contact with their skins for a short period of time prior to pressing for added complexity.

Deep Dive re skin contact on Sauvignon blanc: Kristen Belair, winemaker at Honig explains: Through the 1980s, many winemakers used partial skin contact on Sauvignon blanc. A portion was direct pressed, and a portion was left on the skins for a short period of time. For the latter: after de-stemming, they would let the grapes soak on the skins for a few hours. The contact brought out more of the ruby grapefruit character of the grape variety. Kristine explains this can only be done with cool fruit, not hot fruit, and it is also weather dependent (effects flavors from skins). Other winemakers note that skin contact happens to a small extent invariably depending on the harvest and the timing of the fruit to press.

**TASTING SESSION**

Introductory Slide. Educator to populate power point slides with wine label/wine information on each wine used during the tasting session.

**Major Styles: Discuss during TASTING SESSION**

**Major Styles**

* Oaked and Non-oaked are the two major styles; Lees stirring is also a major consideration for the final style.

**Talking Points:**

**In A Blind Tasting:**

* In a blind tasting, you’d know Napa Valley sauvignon blanc by its **textural richness**, and flavors from stone to tropical fruits, with many having a hint of floral (white blossoms). Napa Valley sauvignon blancs do not often show pronounced green flavor characteristics of the grape due to the warmer climate and advanced canopy management in the vineyard today, although several producers look to express the grape’s natural grassy or herbal aromas and flavors as part of their desired style.

Deep dive re flavors: Flavors of sauvignon blanc wines are also greatly influenced by the choice of yeast strain used for alcoholic fermentation. Some winemakers use a variety of yeast strains to encourage a range of flavor results.

* The wines may be enhanced by MLF/partial MLF (for softer acids and a richer texture) but many winemakers avoid MLF for sauvignon blancs to retain fresh varietal aromatics and maintain acidity. [MLF can be avoided by using SO2)
* Lees stirring in neutral oak adds richness and texture.
* Oak-influence adds layers of toasty, nutty or sweet spice complexity.
* **The wines are typically dry**, although you can find examples with a touch of residual sugar. Sweet sauvignon blanc wines were historically important and still exist today as dessert wines.
* **Napa Valley’s sauvignon blancs are generally varietal wines, but may contain small percentages of other grapes such as semillon for complexity or texture**.
* **Drink young to enjoy fresh, fruity flavors. Not intended for long aging**.
* Stylistically today:

**There is a rise in the number of non-oaked sauvignon blancs to please the diverse palates of wine enthusiasts today. The oak-influenced wines made today show well-integrated oak flavors that are subtler on the nose and palate**.

**Versus Other Regions**

COMPARISON:

* **New Zealand and France’s Loire Valley**: Napa Valley sauvignon blanc falls between the incredibly pungent and aggressive New Zealand style (which generally has flavors including: grass, bell pepper, capsicum, tropical fruits) and the Loire’s more subtle versions that concentrate on the subtleties of terroir over flavor (expressing mineral, smoky, or flinty character).
* **Bordeaux blanc** has subtler fruit with racy acidity; often blended with the richer bodied semillon to balance sauvignon blanc’s high acidity.

Optional:

COMPARISON RE OTHER VARIETIES: Sauvignon blanc is more aromatic than Chardonnay, retaining its signature pronounced flavors/personality regardless of the winemaking procedures. Chardonnay, on the other hand, is more malleable, ready to take on a personality through winemaking procedures.

**Chardonnay**

**History**

Graphic:

Vine growth reflecting timeline of grape’s travel from old world to CA and specifically Napa Valley.

1. Starting with roots in the old world
2. The date/time period it entered CA

3. The date/time period it arrived in Napa Valley

4. For Chardonnay, there is a 4th important event in the timeline: the Paris Tasting.

**Talking Points:**

Parentage

* **Pinot Noir and the near-extinct Gouais Blanc are its parents, both of which were widespread in North-East France in the Middle Ages.**

Old World

* **The Chardonnay name traces its** **heritage to the Middle Ages and a small village of the same name in France’s Maconnais region in southern Burgundy**.

CA

* **Chardonnay found its way to the New World in the late 19th century**. **It is hard to track Chardonnay’s first plantings in California as it was often confused with pinot blanc, melon and other grapes**. The former (pinot blanc) is what caused Chardonnay to be called Pinot Chardonnay in California up until a few decades ago. In fact, it was still being called Pinot Chardonnay in Napa County’s grape crop reports in the 1970s.
* In 1882 Charles Wetmore (President of the CA State Viticultural Commission) imported Chardonnay budwood from Meursault in Burgundy and distributed it in CA. He recommended ‘Chardenai’ be tried in an 1884 industry report. Chardonnay later appeared in H.W. Crabb’s nursery list as ‘White Pineau-Chaudenay’. Inglenook had a grape called ‘White Pinot’ growing in 1889.
* Wetmore’s budwood provided an integral component of the Wente clone: plant material that became the main chardonnay plantings around the State.
* **After Repeal, there was almost no Chardonnay in CA**. The thin-skinned grape did not travel to the east coast very well for home winemakers during Prohibition.

Napa Valley

* **In 1947 the McCreas planted Chardonnay on Spring Mountain at Stony Hill.** There were only 200 acres of Chardonnay in all of CA at the time. John Kongsgaard, who worked at Stony Hill, later made an unfiltered Chardonnay at Newton. Louis Martini made one of the earlier chardonnays but on the Sonoma side of the Mayacamas Mountains.
* **In 1976, the 1973 vintage of Chateau Montelena Chardonnay was one of the highest scoring chardonnays at the famous Paris Tasting**. At that time, Chardonnay was still being called Pinot Chardonnay in the Napa County Crop Report.
* In the late 1970s and early 1980s, the popularity of Chardonnay exploded due to several occurrences including the Paris Tasting, and the general popularity of white wines with consumers.

**Importance in Napa Valley**

Graphic

Dashboard providing acreage and key economic figures

**Inclusion Points: 2015 Napa County Crop Report**

* #1 planted white grape in the Napa Valley
* 6,398 acres
* $2,595 per ton
* 54.8 MILLION IN VALUE ($54,807,840 exact figure;per ton x tonnage)

Extra Info (also 2015 Napa County Crop Report figures)

* 21, 145 tons

**Defining characteristics in vineyard**

Graphic: Meter image with gradations of character strengths

**Talking Points:**

* **Prolific producer**
* **Early budding** (generally a week after Pinot Noir). Much is planted in Carneros where there is a low frost risk due to weather patterns from the nearby Pacific ocean.
* **Early ripening**
* **Versatile; can be grown anywhere**– thrives in a wide range of climates. Easy to grow and easy to ripen.
* **Clusters are small to medium in size**; berries are relatively small and thinner-skinned.
* Chardonnay is susceptible to mildew and rot, which is low risk in Napa Valley’s drier growing season.
* Napa Valley Vintners reports that Chardonnay is planted primarily in Carneros, Oak Knoll, and Spring Mountain in the Napa Valley

Deep Dive: First plantings of chardonnay proved difficult. Chardonnay became a prolific producer in Napa Valley once growers started to use higher yielding, virus-tested clonal material: clonal selections helped improve small yields, and vines were heat-treated at UC Davis to combat viruses.

Deep dive on why plantings are predominantly in **Carneros, Oak Knoll and Spring Mountain,** if chardonnay is so versatile: Historically, chardonnay was planted in areas thought to be too cool for cabernet sauvignon (at elevation, in shadow of mountains) – so some plantings have these historical roots. In addition, in the 1980s with the big trend for chardonnay, it was planted everywhere-- until it started to lose ground to the new favorite: cabernet sauvignon. The switch to cabernet sauvignon also has economic roots: the tonnage price to be garnered for cabernet sauvignon was/is higher than for chardonnay.

In **Carneros**, there are less frost issues for this early budding variety because of the winds [making it difficult for frost to settle]. The cooling fog of the San Pablo Bay, and especially the cooling fog through the Petaluma Gap – which effects Carneros even more than the San Pablo Bay fog - helps retain acidity and aromatics in chardonnay wines made from grapes grown here: something that is revered here in the valley for varietal wines and for regional blends of fruit from different chardonnay vineyards.

Deeper dive in Napa Valley quality: Once UC Davis created higher yielding and virus-free clonal material, plantings and resulting wine quality of chardonnay increased.

Clonal choice is of particular importance.

Deep dive in the vineyard: Chardonnay has extensive leaf cover which takes in high levels of energy and nutrients for its grape clusters.

**Defining characteristics of grape/wines**

Graphic:

Grape bunch where intensity of structural components is viewed by increasing level of color gradation in the grape bunch.

**Talking Points:**

* **Low aromatics**
* **Varietal character is subdued** **and malleable**, awaiting imprint of soil, climate and winemaking.
* Flavors range from green fruit and citrus in cooler regions to stone fruit (pear, peach) and then to tropical fruit in warmer climates.

**Winemaking Techniques**

Graphic

Vessel images with reveal-able text re impact of vessel

**Talking Points:**

Pre-fermentation

* Direct press and crush-to-press are both options used by Napa Valley winemakers.
* Some producers feel a small amount of skin contact adds flavor complexity and richness and so they allow the skins to stay in contact with the juice for several hours.

Fermentation

*Explain with stainless steel image*

* Napa Valley winemakers use any number of different vessels for chardonnay fermentation. These include neutral vessels such as stainless steel tanks, as well as stainless steel barrels, concrete and neutral barrels for fruity styles.

*Explain with concrete egg image*

Concrete tanks are not typically used for chardonnay wines in the Napa Valley.

*Explain with barrel image*

* Neutral oak barrels with lees stirring for richness and texture without oak influenced flavors is often used
* Oak fermentation in new or newer oak barrels is also used for integrated fruit and oak-flavors
* Chardonnay is generally fermented dry, although some wines may have a small amount of residual sugar
* MLF or partial MLF is generally used to soften the acidity (malic to lactic), and add flavors ie butter and cream. Some believe it diminishes fruit intensity.

* + - Deep, Deep Dive on MLF and Bacteria: For wines allowed to go through MLF, the winemaker will usually introduce a small starter culture of bacteria to initiate the process. MLF is influenced by the strain of bacteria, ie – the winemaker can chose a strain that only transforms acid and does not give the secondary aromas of butter (caused by the ester, diacetyl).

Aging

* **Oak aging is typical for Napa Valley chardonnay, for layered flavor complexity and texture. New and/or previously-used oak barrels are used**. (Often a mix of new and used barrels are employed.)
* Non-oaked wines are generally bottled the year after harvest to showcase fresh, fruity flavors.
* **Chardonnay is typically bottled as a single variety or with small percentages of other white varieties.**
* Wines can be aged from several months to a couple of years, with the latter done in oak barrels to add flavor complexity to the final wine.
* Stylistically today: Current oak use is more subtle with oak-influenced flavors that are well-integrated into the final wine.
* Other Important Styles from Winemaking: Chardonnay is also a very important grape variety for Napa Valley sparkling wines. These are bottled either as 100% chardonnay (blanc de blancs style), or blended with pinot noir and/or pinot meunier. Traditional method is the most common production method used in Napa Valley [where second fermentation takes place in the same bottle that is sold in the marketplace.]

Deep Deep Dive re yeast use in chardonnay: The use of wild yeast has returned in popularity for alcoholic fermentation. For purchased yeasts, some winemakers mix yeast strains, ie choosing an aromatic yeast and a neutral yeast.

**Chardonnay Did you Know?**

MLF

MLF or partial MLF is common in Napa Valley and is generally used to soften the acidity (malic to lactic), and add flavors ie butter and cream. Some believe it diminishes fruit intensity.

**Major Styles: Discuss during TASTING SESSION**

**TASTING SESSION**

Educator to populate power point slides with wine label/wine info on each wine used.

**Major Styles**

Oak-influenced, Non-Oaked; full MLF or Partial MLF

Final wine styles are particularly tied to winemaking with chardonnay. The wines get much of their character from these two processes:

(1) MLF

(2) Oak and the degree of its use.

* + MLF = richer mouth feel, buttery/cream flavors, softer (lactic) acidity
  + Oak flavors: including but not limited to: toast, smoke, caramel, cream, pungent spice (such as black pepper) and sweet spices (such as cinnamon, cloves, vanilla, coconut).

**In a Blind Tasting ……**

**Oaked style**

* In a blind tasting, you would know Napa Valley oaked chardonnay for its full body; rich texture; and ripe flavors of red apple, fig, melon, pear, peach, and pineapple matched by secondary aromas and flavors of butter, sweet spice, and hazelnut from MLF, oak fermentation and/or oak aging.

**Non-oaked style**

* In a blind tasting, you would know Napa Valley non-oaked chardonnay for its full body, rich texture (often helped by lees stirring) and ripe (and sometimes subtle) citrus to stone fruit and tropical flavors with medium acidity.

**MLF:** The extent of MLF (partial, full) and the bacterial strain will influence the final texture and flavors. You would know full MLF by the very creamy palate, soft acidity, and added aromas of butter.

Deep dive into MLF: While some call it a secondary fermentation, it is not a true fermentation but a conversion process that can take place simultaneously with, or following, primary (alcohol) fermentation. It is carried out by bacteria, not yeast (lactic bacteria), that decomposes the sharp malic acid (found in apples) into the creamier, softer lactic acid (found in milk). A by-product created from MLF is the ester *diacetyl* which creates a buttery aroma to the wines.

Deep, Deep Dive: MLF is influenced by the strain of bacteria, ie – a winemaker can chose a strain that only transforms acid and does not give the secondary aromas/flavors of butter.

**Versus Other Regions:**

* **Cote d’Or** : Even when Napa Valley chardonnay is made using the same winemaking techniques as Bourgogne blanc wines: oak fermentation and aging; MLF; and stirring on lees, you would know a Napa Valley Chardonnay blind by its riper more pronounced fruit and oak-forward profile. Napa Chardonnay shares more in style with its Australian counterparts (such as in Yarra Valley).

Deep Dive on blind tasting chardonnay: Techniques used throughout Burgundy: barrel fermentation, MLF, batonnage- add or bring out buttery, creamy flavors to the wine. New World techniques-maceration with the skins, cold fermentation, ultra-hygiene – give tropical fruit-forward flavors. From the 1980s forward, as Oz Clarke explains in *Grapes and Wines,* each camp has increasingly adopted the techniques of the other, which has led to cleaner, fresher white Burgundy and more elegant, restrained and subtle New World Chardonnays. **A blind tasting is getting increasingly difficult to do.**

**Pinot Noir**

**History**

Graphic

Vine growth reflects the timeline of grape’s travel from old world to CA and specifically Napa Valley:

1. starting with roots (where it came from in the old world) to:
2. the date/time period it entered CA
3. the date/time period it arrived in Napa Valley

**Potential Talking Points:**

Parentage and Old World

* **Thought to have existed for over 2,000 years**. First documented mention was under the Moreillon name (aka Morillon). There are many theories on how it got that name including from the Moors in North Africa. Noiren was another oft-used name for pinot noir, and *noir* means black.
* **First mention with current spelling was in 1375 in France**; royal ordinances show it was highly revered.
* True origins still unknown.

CA

* **Whether Agoston Haraszthy of Buena Vista, Charles LeFranc of Almaden Vineyards or Frenchman Pierre Pellier brought pinot noir to CA is a matter of debate.**

Napa Valley

* Pinot noir appeared in Napa Valley vineyards such as Gustave Niebaum’s at Inglenook in the late 1800s.
* It was not highly regarded initially; no one (including H.W. Crabb and Eugene W. Hilgard) was recommending the grape or producing a wine that in any way resembled Burgundy.
* When Georges de LaTour got into the wine production side of the business in 1902 he initially chose lower end reds. But by 1907 he was planting pinot noir (15 acres) along with cabernet sauvignon. Beaulieu added to their pinot noir plantings in 1909 with 10,000 more vines.
* Ahead of his time, Louis Martini bought 200 acres of the Stanley Ranch in Carneros in 1942 – a place that would later become a mecca for pinot noir- and experimented to find the best pinot noir clones.
* **Andre Tchelistcheff produced two gorgeous vintages (1946, 1947) for Beaulieu that quickly became the benchmark style for CA point noir.**

**Importance in NV**

**Talking Points from 2015 Napa Crop Report**

* 2,763 acres
* $ 2,713 per ton
* $16.9 MILLION VALUE (exact total is $16,950,624; tonnage x price per ton)

Extra Info:

* 6,248 tons

**Defining Characteristics in the Vineyard**

Graphic

Meter image with gradations indicating character strengths

* **Thin skinned so less pigmentation**
* Moderately vigorous, modest producer
* **Among earliest budbreaks** (makes it a fine grape for Carneros where frost risk is low due to ocean winds: frost does not settle/humidity)
* **Relatively early maturing**

Deep dive: The grape is an attractive choice in general for cooler areas because the grape ripens relatively early compared with other vitis vinifera.

* Small clusters
* Wines can have substantial flavor despite the grape’s delicacy
* Tendency to gain complex aromas and flavors; considered by many to be one of the most complex of all varieties.
* It is considered a cool climate varietal, retaining its fresh, fruity aromatics in cooler climates. When grown in hot climate, the grape’s great aromatic/delicate flavors are reduced. (a fine grape for Carneros where the cooling influences of the ocean are strongest)

**Pinot Noir: Did You Know?**

**Clones**

* Clones are exact copies of a preferred and particular plant. That plant may have been revered for its berry size, its cluster size, its color; its yield – or any number of other characteristics. Wine growers can buy a certain clone to fit their climate, soil or even their desired wine style.
* A clone is created by taking a section of the particular and preferred vine and letting that grow into a new plant, albeit one with an exact genetic copy of the plant it came from. This clone gets a name, which is sometimes just a number, so it can be tracked.
* Different names of popular pinot clones include: Pommard (also called UC Davis 4); Wadenswil (after its Swiss homeland/where it is originally from); and a number of clones that fall under the umbrella name of Dijon clones, but are also known by their numbers, such as: 114, 114, 155, 667, and 777.
* Each clone has its own set of genetics, so different clones vary genetically.
* Deep dive on clones. Clones can be made using one of two methods:

Cuttings or layerings. Both of these methods rely on a plant’s ability to regenerate itself from smaller pieces. A cutting is taken from the shoot of a healthy plant (before it becomes woody). This is planted and takes root and grows into a new vine. Layering is done by bending a cane of a vine down and burying a section of it in the vineyard ground. The buried section will take root and once it has established itself, the cane linking it to the original vine is cut. Cuttings and layering have been done for centuries and have made it possible for certain grape varieties with preferred characteristics to dominate certain vineyard areas.

* The FPS- Foundation Plant Services – in California is the keeper of clones for the wine industry in the U.S.

**Defining Characteristics of the grape/wine**

Graphic

Grape bunch where intensity of structural components is viewed by increasing level of color gradation in grape bunch.

**Inclusion Points:**

* Bright acidity
* Earthy
* Silky texture
* Red fruits from cranberry to black cherry
* Lighter tannins possible (depending on winemaking choices)

**Typical Winemaking**

Graphic:

Vessel images with reveal-able text re impact of vessel

Pre-fermentation

* Destemming/crushing; or whole clusters (to heighten fruitiness)
* Some producers ferment whole clusters (or a percentage of whole clusters) for heightened fruitiness, but they also prefer the stem inclusion with whole clusters as it adds a bit of spice and structure to the texture.
* Many go through cool maceration period (cold soak) to extract additional color and tannins.

Fermentation

*Explain with stainless steel tank*

* **Alcohol Fermenation in stainless steel tanks**, large oak casks, concrete, and bins (the latter for smaller lots). Sometimes producers will use a mix of stainless steel and large oak casks.
* **Open top vats** are used by some producers for ease with punch-downs, in order to extract phenolics (color, tannins).
* Some producers opt for whole berry fermentation (ie carbonic maceration) using a small percentage of stems for structure/tannins.
* Pump Over/punch down/rack and return

Post fermentation

* Extended maceration is an option taken by Napa Valley winemakers

[The length of this step is dependent on final style desired: color extraction occurs most rapidly at beginning of fermentation, whereas tannin is released more slowly and increases as heat and alcohol levels rise. If you want a wine with more tannins that will age, producers will keep the wine in contact with the skins for several weeks after the end of fermentation.]

* Drain and press
* Optional: addition of press wine

*Explain with oak barrel image*

* Barreling down of pinot noir is generally done in Napa Valley
* MLF (in barrel or tank, post pressing)

(MLF is common in red wines. Softens and reduces acidity. Carried out by lactic bacteria converting malic acids (found in apples) to lactic acids (found in milk).

* Blending: Often bottled as a varietal wine.

Aging

* Maturation in new oak is typical, but can combine any percentage of new oak to previously used oak barrels.
* Length of aging ranges from several months to several years.
* Other Important Styles from Winemaking: Pinot noir is also a very important grape for Napa Valley sparkling wines. These are bottled either as 100% pinot noir or blended with pinot meunier (blanc de noir style), or blended with chardonnay. Traditional method is the most common production method [second fermentation takes place in the same bottle that is sold out in the marketplace.]

Deeper dive: A typical winemaking regime could look like this:

The clusters are harvested in the cool of the morning to retain fruity, delicate flavors. A portion of the grapes is de-stemmed before being transferred to fermenters as whole berries to heighten fruitiness. The remaining portion is fermented as whole clusters (with stems) to add a bit of spice and structure to the texture. During that time the cap of skins is punched down gently ensuring a soft, silky mouthfeel. Several days of cold soak prior to fermentation and extended maceration afterwards added up to a total of twenty-one days of wine to skin contact to achieve rich, fully developed flavors. The new wine is barreled down into French oak, 89% new, for malolactic fermentation and then matured for ten months.

**Major Styles: Discuss during TASTING SESSION**

**TASTING SESSION**

Educator to populate power point slides with wine label/wine info on each wine used.

**Major Style**

Rich, deeper in color, concentrated and complex flavors with layered oak-influenced flavors

**In a Blind Tasting….**

**Talking Points**

* **You’d know a Napa Valley Pinot Noir in a blind tasting** by its **richness; deeper color; concentration; and complex range of flavors including pronounced oak-influenced flavors.**
* General pinot noir note: Most pinot noir around the world is relatively soft (low in tannins) and fruity. It is only when tasting the classics in Burgundy or exciting new world Pinot Noirs like those in California does the wine take on an added complexity.

**Versus other Styles/ Regions**

**New Zealand.** New Zealand Pinot Noir from the Central Otago region, with its continental climate, produces a style closer to Napa with a deeper color, fuller body, and higher alcohol.

In the more Maritime regions of New Zealand, the wines are closer in style to **Oregon pinot noir**: lighter in color, body, and tannins than Napa Valley pinot noir.

**Oregon.** The general style is highly affected by the cooler growing region, producing lighter colored, lighter bodied wines balanced by higher acidity. The best have integrated oak-influenced flavors.

**Carneros.** The cooler area of Carneros shows nervy (refreshing acidity) wines with cherry and wild strawberry fruit flavors and a lighter body than those found north of this region.

[Deep dive/general note: Better clones, especially the Dijon clones, seem to be better adapted to the region, although site, vine age and the grower are probably more important to the final result, according to Oz Clarke, *Grapes and Wines*.

Deep Dive re Carneros:

Carneros, where temperatures are 3-5 degrees cooler than the northern part of Napa Valley, and where the lack of rich humus in the soil produces less vigorous vines and lower yields, is where you get the fascinating fragrance and silkiness of Pinot Noir, according to Oz Clarke, *Grapes and Wines*.

**Burgundy**. The top wines (Grand Cru red Burgundy) can be tough in their youth and need a decade or two for their complexities to unfurl.

**Merlot**

**Merlot: Did You Know?**

**One of the Bordeaux Five**

While other varieties are allowed, there are five main red grapes that make up the Bordeaux blend. Merlot is the most planted red grape in Bordeaux and it especially stars in blends produced on the Right Bank of Bordeaux. Cabernet sauvignon, which can ripen well in the gravelly soils on the left bank, is the dominant component of Left Bank blends.

Cabernet sauvignon and merlot are known to be key blending partners, with cabernet sauvignon providing the firm backbone, and merlot adding richness to the palate (mid-palate in particular).

Key attributes of each variety:

**CABERNET SAUVIGNON**

Tannins – ageability

Color

Core blackcurrant fruit

**CABERNET FRANC**

Less body than CS, Fragrant

Bigger yields than CS

**MERLOT**

Softness, richness, adds body to austere CS

Ripens easier

**PETIT VERDOT**

Deep color, tannins/ageability

Exotic spicy flavors; hard to ripen

**MALBEC**

Less used in Bordeaux today but gives dark color, perfume

**History**

Graphic:

Vine growth reflects the timeline of grape’s travel from old world to CA and specifically Napa Valley:

1. starting with roots (where it came from in the old world) to:
2. the date/time period it entered CA
3. the date/time period it arrived in Napa Valley

**Talking Points (most important in bold):**

Parentage

* **Merlot is an offspring of cabernet franc** (and an obscure, unnamed variety) and is a half-sibling (have one parent in common) of cabernet sauvignon, carmenere and malbec.

Old World

* **Merlot can be traced back to the 1st century in France - in Libourne, the right bank of Bordeaux**, but it was not considered a noble Bordeaux variety until the 1800s.
* The name comes from the French word for *blackbird* (merle)– supposedly due to the fact that blackbirds were particularly fond of eating these grapes.

CA

* **Medoc varieties were brought to Northern CA in 1850s by Santa Clara Valley Frenchmen Antoine Delmas and Charles Lefranc. Lefranc made the first commercially successful CA ‘Medoc’ in the 1860s.**
* Merlot would later emerge as a varietal rock star around the country in the 1970s. It was easy to pronounce and easy to sip (softer/less tannic than cabernet sauvignon).

Napa Valley

* While zinfandel was the most popular red variety in CA in the late 1870s (a badge it would wear well into the mid 1900s), **by the 1880s several (at least) Napa growers such as Gustave Niebaum and Louis Martini began planting merlot along with other Bordeaux varieties.**
* In the late 1970s, as varietal wines gained in popularity, several producers made moves to concentrate on merlot in cab-dominated Napa Valley, including Duckhorn in 1978; Rutherford Hill in 1980; and Swanson bought his vineyards in 1985, hiring Andre Tchelistcheff as a consultant in planting merlot in “king cab” country.
  + Deeper dive: By the 1980s, merlot plantings were on the rise in Napa Valley. When a large crop in 1986 brought down prices for most varieties, profits for merlot – along with cabernet sauvignon- soared instead. Merlot was the valley’s most profitable variety per acre at that time.

**Importance in Napa Valley**

Graphic. Dashboard imageproviding acreage and key economic figures

**Talking Points:**

Zinfandel may beat out plantings of Merlot when we talk about State numbers, but not here in the Napa Valley.

* 4,749 acres
* $ 3, 135 per ton
* Total value $44 MILLION (actual figure is $43,974,645; per ton x tonnage)

Extra Info:

* 14,027 tons

**Defining Characteristics in the Vineyard**

Graphic: Meter image with gradations indicating character strengths

**Talking Points:**

* **Early budding (just after chardonnay)**
* **Mid-ripening variety**
* Easier to ripen (matures earlier) than cabernet sauvignon
* Medium to high vigor
* Loose bunches of large berries
* Fertile (best if short-pruned, to control growth).
* Tolerates and even thrives in soils too poor or too moist or too cold for cabernet sauvignon
* Merlot generally achieves sugar levels up to a full 1% of alcohol more than cabernet sauvignon
* The combination of the opulence of merlot and the CA sunshine can be overwhelming: the trick is to retain a certain freshness.

**Defining Characteristics of Grape**

Graphic

Grape bunch where intensity of structural components is viewed by increasing level of color gradation in grape bunch.

* Less aggressive tannins than cabernet sauvignon
* Fuller mid-palate/fleshiness. Best have velvety richness; floral aromas.
* More obvious fruit (sweet plummy)
* Like its relatives, cabernet sauvignon and cabernet franc, merlot can exhibit herbaceousness if under-ripe, though to a lesser extent.

**Typical Winemaking Techniques**

Graphic

Vessel images with reveal-able text on impact of vessel

**Potential Talking Points**

Pre Fermentation

* Destem/Crush or Whole Berry
* Cold Maceration prior to fermentation often done for color and phenolic extraction

Fermentation

*Explain with stainless steel tank image*

* Neutral vessels are generally used for red wines: tank, large oak casks; concrete; bins (for smaller lots).
* Pump Over/punch down/rack and return/rotary fermentation

Post Fermentation

* Optional extended maceration

Deep dive on maceration: the length of this step is dependent on final style desired: color extraction occurs most rapidly at beginning of fermentation, whereas tannin is released more slowly and increases as heat and alcohol levels rise. If you want a wine with more tannins that will age, producers will keep the wine in contact with the skins for several weeks after the end of fermentation.

* Drain and press
* Optional: addition of press wine

*Explain with oak barrel image*

* Barreling down is typical in Napa Valley (wine goes from tank to barrel for some period of oak aging)
* MLF (in barrel or tank, post pressing)

Deep dive: MLF almost always conducted in red wines, softening and reducing the acidity. Carried out by lactic bacteria converting malic acids (found in apples) to lactic acids (found in milk.)

* Blending: Often blended with cabernet sauvignon to add richness, body and texture to the more structured, more tannic cabernet sauvignon.
* Both varietal wines and 100% merlot wines can be found in Napa Valley.
* Maturation in oak common.
* Aging can be from several months to several years
* Merlot winemaking regime is as with cabernet sauvignon regime in Napa Valley

**Major Styles: Discuss during TASTING SESSION**

**TASTING SESSION**

Educator to populate power point slides with wine label/wine info on each wine used.

**Major Style**

Full-bodied, deep colored, concentrated wines

**In a Blind Tasting ….**

* Napa Merlot is tricky in a blind tasting. There are varied styles ranging from medium bodied, bright, fruity and fresh to cabernet sauvignon-like: full bodied, extracted dark fruited wines with high tannins and alcohol. The latter is the most commonly found style in Napa Valley.
* You can expect NV Merlot to be fleshier than cabernet sauvignon with a fuller mid-palate, a velvety texture and less tannins.
* Often merlot is blended with cabernet sauvignon, the latter giving added color, structure and tannins to the wines. Merlot can achieve this on its own in the Napa Valley, however.

Deeper Dive: Cooler spots that don’t suit Cabernet Sauvignon suit Merlot; ie Carneros merlot gives bright fruit flavors. Parts of Napa like Oakville and the Stags Leap District give richer wines; and hillside sites like Howell Mountain impart structure and ageability to Merlot.

**Versus Other Regions**

* **Right Bank Bordeaux** are often blended as well (typically with Cabernet Franc though) and also have a soft, rich mouth feel compared to its own French counterpart on the Left Bank. While the Napa and Bordeaux wines share red to blackberry fruit, tobacco and cedar nuances, the Bordeaux wines tend to be tighter upon release.
* **Chilean Merlot** is known for the popular exported style: inexpensive, medium bodied and fruit driven wines. While they are marketing more full-bodied, oaked versions, these Chilean merlots tend to be less rich with less opulent oak flavors than their counterparts in Napa Valley. (Although there are exceptions today in Chile)

**Cabernet Sauvignon**

**History**

Graphic:

Vine growth reflects the timeline of grape’s travel from old world to CA and specifically Napa Valley:

1. starting with roots (where it came from in the old world) to:
2. the date/time period it entered CA
3. the date/time period it arrived in Napa Valley

**Potential Talking Points (most important in bold):**

Parentage

* Natural cross between sauvignon blanc and cabernet franc (just two vines crossing in the night)

Old World

* **From the Gironde in Southwest France.** Earliest mentions are under the name *Petit Cabernet* in the third quarter of the 1700s. Prior to this, it may have been confused with other grapes, or it is quite possible that the grape did not exist before the 18th century.
* Cabernet Sauvignon got its name from the fact that its wood and leaves resembled those of sauvignon blanc (one of its parents, it would later be revealed).
* Carole Meredith’s PhD student, Napa Valley-native John Bowers, made the discovery of cabernet sauvignon’s parentage, noticing DNA profiles consistent with sauvignon blanc and cabernet franc.

CA

* **Introduced into CA in the 1880s along with other Southwest France varieties.**

Medoc varieties brought to Northern CA in 1850s by Santa Clara Valley Frenchmen Antoine Delmas and Charles Lefranc. Lefranc made the first commercially successful California ‘Medoc’ in 1860s.

If asked, other pioneers are said to have brought the Medoc varieties to California, including Charles Wetmore and Agustin Harazsthy. We leave that to the ancestors to duke out.

Napa Valley

* **Gustave Niebaum planted cabernet sauvignon at Inglenook by 1883.**
* Hedgeside Winery (now Del Dotto property) on Atlas Peak produced a cabernet sauvignon that would become one of the leading cabernet producers in the Napa Valley between 1882-1883.
* In the 1880s, H.W. Crabb, one of the country’s foremost vine nurserymen, gave the St. Helena Star a list of his bounty: yes, zinfandel--but also cabernet sauvignon was included. **In 1884, Crabb called for ‘really better varieties’, including more cabernet sauvignon, to be planted in the Napa Valley**.
* Also in 1884, Tiburcio Parrott began planting Bordeaux varieties on Spring Mountain and his wines became some of the most sought-after in Napa Valley in the 1890s.
* John Concannon imported cuttings from Chateau Margaux in Bordeaux in the late 1800s.
* In 1890s, Howell Mountain would develop a world class reputation for its cabernet sauvignon wines (following the same for its Zinfandel)
* The 1900 Paris Exhibition gold bestowed onto Howell Mountain’s Liparita Winery would make it Napa’s most-sought Cabernet Sauvignon.
* When Georges de LaTour got into the wine production side of the business in 1902 he first chose lower end red varieties. But by 1907, he was planting cabernet sauvignon on 20 acres [as well as pinot noir].
* **Following Prohibition, there were less than 100 acres of cabernet sauvignon in CA.**
* Ask participants: By the 1950s, cabernet sauvignon was the most allocated wine in the valley, right? No! In the 1950s and 60s, for example, the most allocated wine at Krug was a chenin blanc.
* In the 1960s, cabernet sauvignon was planted in the Eisele Vineyard, replacing previous frontrunners: zinfanadel and riesling; a sign of things to come.
* **The legacy of cabernet sauvignon and fine winemaking, from the end of Prohibition to the renaissance in 1960s and 70s, began with wineries such as Louis M. Martini, Charles Krug, Inglenook, and Beaulieu**.

Deep dive: One theory on how cabernet became so widely planted in the valley: the old co-op sent a letter to growers in 1978 or 1979 saying that they would no longer take mixed black grapes, and that all future receipts at the co-op would need to be identified by variety. The co-op suggested that if growers were going to replant, that they believed Cabernet Sauvignon would be a good choice.

[source: Casa Nuestra]

* Other reasons for cabernet sauvignon’s success:

Waning interest in Chardonnay, and a major replanting in the wake of a second phylloxera epidemic in the late 1980s and early 1990s, led to opportunities for increased plantings of Cabernet Sauvignon.

* Today it remains the top planted grape in the Napa Valley.

**Importance in NV**

* Top planted grape variety
* 19,810acres
* $6,289 per ton (over $5,474 in 2013 and $5,060 in 2012)
* $334.5 MILLLION VALUE (exact figure is $334,543,355)

Extra info:

* 53,195 tons

Napa Rocks (dated prior to 2016 and this research) says:

* 40% of Napa’s planted acreage but 58% of economic value

NAPA ROCKS FIGURES:

* Cabernet Sauvignon accounts for 12% of California’s wine grape harvest.
* It makes up approximately 40% of Napa Valley’s overall wine grape harvest, yet had a value of 55% of the harvest, according to the most recent crush report.
* In 2011, the value of a ton of Napa Valley Cabernet Sauvignon grapes was four times the statewide average price for a ton of Cabernet Sauvignon grapes.
* Napa’s quality is reflected in its grape prices.

**Defining Characteristics in the Vineyard**

Graphic

Meter image with gradations indicating character strengths

* Vigorous but not exuberant
* **Late budding (advantage in areas with Spring frost risk)**
* **Mid to late ripening (so needs a long growing season, which Napa Valley enjoys)**
* **Grape clusters are small to medium in size, and berries are generally small**
* **Relatively high acidity**
* Tough, resistant skins
* **Small grapes and thick skins provide for high levels of phenolics: deep color, high tannins. The phenolics provide the structure for age-ability of the wines.**
* The vine’s hard wood is especially good for mechanical harvesting (and generally safe from risk of winter freeze in areas where that is a concern)
* Thrives on well-drained soils

**Cabernet Sauvignon: Did You Know?**

* **Benchland** = gentle slopes rising up to the hills. The various soils that are deposited on the Benchlands (called alluvial soils – a blend of gravel, sand, silt and clay) contribute to the style of the wine. They are well draining, and vines planted on them typically have very deep root systems. The Rutherford Bench is a famous example and is comprised of two alluvial fans at the base of the Mayacamas Mountains in western Napa Valley.
* The Benchlands tend to be more fertile than the hillsides, producing broader and more powerful wines packed with ripe black fruit and silky tannins.

* **Hillside or Mountain vineyards**, on the other hand, with their thinner soils, tend more toward wines with greater purity of fruit expression; wines that are tighter (structure), fresher (acidity) and often more perfumed. They are also highly prized for their concentration.
* Each of the mountain ranges: the Mayacamas to the west and Vacas to the east, reaches approximately 2,500 feet above the valley floor.
* Slope, aspect, and elevation all influence the mesoclimates found here.

**Defining Characteristics of Grape**

Graphic

Grape bunch where intensity of structural components is viewed by increasing level of color gradation in grape bunch.

* **Deep/opaque color; high tannins; high acidity.**
* **Distinctive aromas and flavors** **that transcend its vineyard location, no matter where it is planted around the world.**
* **Pronounced aromas and flavors that range from black fruits to herbal/floral (violet) and pungent spice**.
* Under-ripe cabernet sauvignon can take on green (bell pepper) aromas and flavors.

**Typical Winemaking Techniques**

Graphic

Vessel images with reveal-able text on impact of vessel

**Talking Points:**

Pre-fermentation

* Destem/Crush or Whole berry
* Cold Maceration is done by a majority of winemakers

Fermentation

*Explain with stainless steel image*

* Alcohol Fermenation (typically 1-3 weeks) commonly takes place in stainless steel tanks; but some wineries have large oak casks (ie To Kalon Cellar at Mondavi); concrete tanks in various sizes; and bins for smaller lots.
* Pump Over/punch down/rack and return/rotary fermentation

Post fermentation

* Extended maceration is common

Deep dive: The length of this step is dependent on final style desired: color extraction occurs most rapidly at beginning of fermentation, whereas tannin is released more slowly and increases as heat and alcohol levels rise. If you want a wine with more tannins that will age, producers will keep the wine in contact with the skins for several weeks after the end of fermentation.

* Drain and press
* Optional: addition of press wine

*Explain with oak barrel image*

* Barreling down is typical in Napa Valley (wine goes from fermentation tank to barrels after pressing for aging and integration of oak flavors)
* MLF (in barrel or tank, post pressing)

(Almost always done with all red wines. Softens and reduces acidity. Carried out by lactic bacteria converting malic acids (found in apples) to lactic acids (found in milk).

* Blending: Often blended with merlot; the latter providing richness to the mid-palate.

Aging

* Maturation in new oak is typical, but many winemakers opt to age a percentage of the wine in used oak barrels. Some wines, however, are aged in 100% new oak (often French).
* Length of aging ranges from several months to several years. Three to four years is not uncommon.
* Napa Valley cabernet sauvignon wines age well, developing complex tertiary aromas and flavors of leather, chocolate, additional spices, etc.

*Explain with concrete egg image if shown*

Not common for red wine making

**Major Styles: Discuss during TASTING SESSION**

**TASTING SESSION**

Educator to populate power point slides with wine label/wine info on each wine used.

**Major Style**

Powerful, full-bodied, deep colored with pronounced flavors of ripe dark fruit (dark cherry to blackberry) with generous oak-influenced complexity.

**Talking Points:**

**In a Blind Tasting…**

* In a blind tasting, Napa Valley cabernet sauvignon stands out for its pronounced flavors of ripe black fruits (black cherry to blackcurrants; black plums and blackberry, cassis, etc); its full body; high tannin; high alcohol; and pronounced oak-influenced flavors of toast, vanilla, caramel, and other sweet baking spices. There can sometimes be a touch of herbal such as eucalyptus or mint, and floral (violet).
* The wines are bottled as both pure varietal wines and blends (often with merlot)
* It is popular to label wines as vineyard designate wines showcasing a preferred vineyard.
* In warmer climes**,** especially in northern CA, cabernet sauvignon can reach such physiological ripeness (and have been encouraged to do so by long hang times) that they typically don’t need the added flesh of merlot, although some winemakers add a seasoning of other grapes for aromatic complexity.

**Versus Other Top Regions**

* **Bordeaux.** Many people find California cabernet sauvignon wines balanced at a higher level of alcohol than red Bordeaux: generally 14 percent and over.

Napa Valley cabernet sauvignon can be dense and powerful in youth but more approachable earlier than its Bordeaux counterparts.

In Bordeaux, the wine is a blend of varieties not only as insurance against its wetter Maritime climate (causing vintage variation: the difficult/fluctuating climate’s effect on certain grape varieties each year), but also the region is at the northern limits for Cabernet Sauvignon ripening. When not ripe, the wines are long on structure and rather short on flesh, so it is traditionally blended with merlot in the Medoc and Graves.

* Cabernet sauvignon wines from more moderate climates like Bordeaux often produce tightly structured wines in their youth that often need years before they are approachable.
* In warmer climes**,** especially in northern California, cabernet sauvignon can reach such physiological ripeness (and have been encouraged to do so by long hang times) that they typically don’t need the added flesh of Merlot, although some winemakers add a seasoning of other grapes for aromatic complexity. [ a repeat; in case not mentioned in style section]

**Coonawarra, Australia Cabernet Sauvignon:** There are similarities between the styles of Napa Valley and Australian wines in general – each having richness, ripeness, and generous use of oak for certain varieties. The Limestone Coast, where Coonawarra lies, has cold ocean currents from the Antarctic (as Napa has from the Pacific Ocean). The cabernet sauvignon from Coonawarra is intense and structured with characteristic cassis and eucalyptus or menthol aromas. The best wines age well.

**Zinfandel**

**History**

Graphic:

Vine growth reflects the timeline of grape’s travel from old world to CA and specifically Napa Valley:

1. starting with roots (where it came from in the old world) to:
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3. the date/time period it arrived in Napa Valley

**Potential Talking Points (Most important in bold):**

Old World

* Carole Meredith of UC Davis and Mike Grgich went on a ‘zinquest’ as they called it, to determine the true origins of zinfandel in 1998.
* **The grape is originally from Croatia where it was historically called Tribidrag (the oldest name for the grape) and now referred to as Crljenak Kastelanski [‘tsril YEHnak kah/steh/lahn/skee’]. It is identical to Italy’s Primitivo, grown in the Puglia reigon.** Latin *Primativus* means ‘first to ripen’ and the grape was given that name in Puglia due to its early ripening qualities there.

CA

* **While CA has claimed zinfandel as its own, it could not possibly be a native variety. Vitis vinifera is not indigenous to the U.S. and zinfandel is vitis vinifera**. However, California has proven to produce some of the finest examples of Zinfandel anywhere in the world.
* **George Gibbs, a nursery man from Long Island, imported zinfandel from Austria** [the Schonbrunn imperial collection in Wien (Vienna) that contained all the grapes at that time in the Austrian Empire] where it was grown mainly for table grapes. By 1832, ‘zinfendal’ was being sold by a Boston nursery and the Massachusetts Horticultural Society. **Some time around the 1840s it is believed to have made its way west by another nurseryman, Frederick Macondray**. [Clarke, Grapes and Wines].

NV

* **It found its way into Napa Valley vineyards by 1850.**
* **More than anyone, J.W. Osborne was responsible for introducing the zinfandel vine to Napa Valley, having purchased his vines from Massachusetts as a member of the Massachusetts Horticultural Society. He planted it at his nursery, Oak Knoll Farm, in Oak Knoll**. A portion of his property became Eschol Vineyard – now Trefethen. (Had Osborne not been murdered by a former employee, he may have been considered the Father of NV wine.)
* Some claim that Agoston Haraszthy brought zinfandel to CA. We’ll leave that debate to the descendants. Historian Charles Sullivan and others could find no evidence that the vines brought to CA by Harazsthy were shared outside of his Sonoma estate.
* In the 1860s in NV, J. Schram praised ‘zenfenthal’ as the best grape for red wines, and by 1880s, it was a highly successful, commercial grape variety in the region (and State). Schram’s success with zinfandel helped elevate the status of the grape, and Napa Valley wines in general.
* **In the mid to late 1800s, it was one of the most popular red grapes planted**. **Much of it was intermixed in vineyards with other varieties, in what we call “field blends’.** **Zin-based field blends would remain incredibly popular until the 1960s**. (Even Prohibition did not stop zinfandel; it filled many a bathtub in the 1920s and early 30s.)
* With the exploding popularity of cabernet sauvignon in the 1980s, growers began pulling out zinfandel vines as fast as they could to make room for the new king. This included the pulling of many older vines. Where they did survive, these old vines are revered today for producing complex and concentrated zinfandel wines.
* Saving some of the old vine zin from being pulled was the explosive popularity of white zinfandel wine.

Deep dive re: White zinfandel. It is not a grape variety, but speaks to the method of production and final style of the wine created. Often off-dry to sweet, the wines are made like a rosé with minimal skin contact from the zinfandel grapes.

The style came about this way: In the 1970s, Sutter Home Winery increased concentration in their red zinfandel wines by bleeding off some of the grape juice from a red wine fermentation tank to increase the skin to juice ratio of the red wine (providing more color and concentrated flavor to the red wine). The excess juice that was removed/bled off from the red wine tank was fermented separately into a dry, almost white wine. In 1975 however, the winery experienced a "[stuck fermentation](https://en.wikipedia.org/wiki/Stuck_fermentation)", a problem that occurs when the [yeast](https://en.wikipedia.org/wiki/Yeast_(wine)) dies out before consuming all of the sugar.This *problem* *juice* was set aside. Some weeks later the winemaker tasted it, and liked the accidental result: a sweet pink wine. It was bottled and became the popular White Zinfandel wine still enjoyed by many today.

* The style of red zinfandel that is popular today is evolving from the pronounced jammy, overly ripe, heavily oak-influenced, high alcohol style to one with more balanced acidity and oak flavors.

**Importance in NV**

**Inclusion Points:**

* Zinfandel is an important grape variety in Napa Valley, not only due to its historic past but also because Napa Valley, and California zins in general, are considered the best expression of zinfandel in the world.
* 1,317 acres
* $3,390 per ton
* $13.5 MILLION VALUE (exact figure is $13,590,510)

Extra Info:

* 4,009 tons

**Defining Characteristics in the Vineyard**

Graphic: Meter image with gradations indicating character strengths

**Potential Inclusion Points:**

* Medium sized berries
* Thick skinned
* Quite vigorous and productive (better suited to lower fertility and well-drained soils)
* Mid to late ripening
* **Ripens unevenly, so when picked some of the berries have started to raisin**. Often needs to hang on the vine longer to ripen as many berries as possible because of the grape’s uneven pattern of ripening.
* NV growers learned as early as the 1800s: zin sets a second crop after a bad frost, considered a plus for the grape variety.
* Medium to large clusters that are compact and full, and therefore do not like wet weather (so found great home in Napa Valley with its dry growing season).

**Defining Characteristics of grape/wines**:

Graphic

Grape bunch where intensity of structural components is viewed by increasing level of color gradation in grape bunch.

* Pronounced zesty, spicy pepper, raspberry, cherry, wild berry and plum flavors
* Complex range of tar, earth, leather notes
* Acidity level is medium to medium high
* Tannins are generally medium to medium high
* Pigment is medium

**Typical Winemaking**

**Red winemaking**

* Destem/Crush or Whole berry
* Cold Maceration
  + Cold Maceration is done by many winemakers, but for a different reason than for merlot and cabernet sauvignon, generally. With the uneven ripening of zinfandel berries, it is difficult to have an accurate sugar/brix reading. A more accurate reading is taken during this pre-fermentation maceration.

*Explain with stainless steel barrel image*

* Alcohol Fermentation (typically 1-3 weeks): tank, concrete tanks of different shapes; and small bins (smaller lots).
* Pump Over/punch down/rack and return
* Optional: Post fermentation maceration is not always done on zinfandel.
* Drain and press
* Optional: addition of press wine

*Explain with oak barrel image*

* Barreling down is generally done on all Napa Valley zinfandel wines
* MLF (in barrel or tank, post pressing)

(Softens and reduces acidity. Carried out by lactic bacteria converting malic acids (found in apples) to lactic acids (found in milk) as well as creating further flavors (ie butter and hazelnuts).

* Blending: Bottled as both a varietal wine, and as a blend with any number of other red grape varieties.
* Maturation in oak common
* According to Oz Clarke in *Grapes and Wines*, the rich vanilla and spice flavors of American oak marry well with zinfandel’s deep date, raisin richness. Some French oak is being used, but zinfandel’s flavors often dominate the subtler French oak flavors.

**White zinfandel**

Typical winemaking:

As a white wine: run the juice off quickly, ferment it at a cool temperature. Stop fermentation early to leave residual sugar for the popular medium sweet style that remains today.

OR

As a rosé by the saignee method (bleeding off) method: which starts with the fermentation of a red zinfandel wine. Some of the grape juice is bled off/removed from the red wine tank to increase the skin to juice ratio of the red wine (providing more color and concentrated flavor to the red wine). The excess juice that is removed/bled off from the red wine tank is fermented separately. Fermentation is stopped early so residual sugar remains in the wine, producing a sweeter style pink wine that is called White Zinfandel.

**Major Styles: Discuss during TASTING SESSION**

**TASTING SESSION**

Educator to populate power point slides with wine label/wine info on each wine used.

**Major Style**

Powerful, full-bodied, deep colored, intensely flavored and firmly tannic with complexity including from oak-influenced flavors. Many zinfandels are designed to age in Napa Valley.

**In a Blind Tasting**….

* **California zinfandel is considered the best expression of zinfandel in the world. Its success in CA has sparked interest in plantings and wines around the world.**
* **Dry, complex style**: **You’d know Napa Valley zinfandel in a blind tasting** for its power and intensity. Full bodied; pronounced aromas and flavors with zesty, spiced berry fruit; generously rich raspberry, cherry, wild berry and plum flavors. Ripe style takes on jammy fruitiness, and the ripest have a dried fruit character.
* The intense fruit is often accompanied by American or French oak flavors, and there can be a complex range of tar, earth, and/or leather notes in some wines.
* Oz Clarke’s description of top Zin (Paul Draper/Ridge Vineyards): ‘a heady, swirling, perfumed riot of richness and ripeness that never somehow topples over into the banality of stewed fruit and jam’.
* **White Zinfandel – lightly sweet, rosé version** – pink or blush wine: white zinfandel. We can’t forget its contribution to the great red zins of today. It was white zin that saved some of the old vines from being replaced at the outset of the cab craze. To boot, white zin made many an American try wine for the first time. It is still a major seller in the market.
* **Late-harvest Zinfandel** Grapes are left to hang on the vine longer and become raisined (or further raisined) which concentrates the sugars and flavors leading to concentrated and higher alcohol wines.

**Versus Other Regions:**

**Talking Point:**

**Other CA Regions: Dry Creek, Lodi**

* Napa’s heat, which is greater than Dry Creek Valley’s but not as intense as Lodi’s, ripens the grapes easily. Cool nighttime temperatures help the grapes retain acidity. Dry Creek Wines tend to be slightly less full-bodied, with higher acidity, and Lodi Zinfandel tends to be very rich, full-bodied with high alcohol levels.
* Most zinfandel are medium to full-bodied and higher in alcohol : it is related to the climate of where it is grown; the building of sugars; and uneven ripening so some grapes on the bunch are overripe/raisined when picked.

**Italy**

* Primitivo from southern Italy (on the heel in Puglia with Primitivo di Manduria, is the most well-known area for the grape) and the wines are structured and complex: very ripe and rich.
* Croatian examples are not known by most consumers here.

**END**

**SOURCES**

Adams, Wines of America

Amerine, et al Sotheby: Book of California Wine

Bonné , Jon New California Wine

Clarke, Oz Grapes & Wines (Websters International Publishers)

Goldammer, Ted Grape Grower’s Handbook (Apex Publishers, 2013)

Laube, James Wine Spectator CA Wine

Lukacs, Paul American Vintage: The Rise of American Wine

Lukacs , Paul The Great Wines of America

MacNeil, Karen The Wine Bible, 2nd Edition

Murphy, Linda and Jancis Robinson American Wine

Muscatine, Doris and Maynard Amerine and Bob Thompson Book of California Wine (1984, The University of California Press - Sotheby Publications)

Mendelson, Richard and Steinhauer, Robert, winesandvines.com November 2011 Issue, *Napa Valley Viticulture: A Farmer’s Outlook*

Robinson, Jancis Vines Grapes Wines

Robinson, Jancis ; Julia Harding and José Vouillamoz Wine Grapes (Harper Collins, 2012)

Robinson, Jancis Oxford Companion to Wine

Laube, James California Wine

Sullivan, Charles Napa Wine : A History

Weber, Lin Old Napa Valley : The History to 1900 (Wine Ventures Publishing, 1998)

White, Kelli A., Napa Valley Then and Now (Rudd Press, 2015)

Winkler, et al General Viticulture (U of CA Press)

Wines and Spirits: Understanding Style and Quality :Advanced Level 3 Study Guide (Wine & Spirit Education Trust)

Certified Specialist of Wine Study Guide 2015, Society of Wine Educators

Napa Valley Vintners Association Website

Napa Rocks presentation, Napa Valley Vintners

<http://iv.ucdavis.edu/?uid=267&ds=351> (powdery mildew)

<http://www.ipm.ucdavis.edu/PMG/PESTNOTES/pn7494.html> (powdery mildew)

http://iv.ucdavis.edu/files/24351.pdf

<http://www.nass.usda.gov/Statistics_by_State/California/Publications/Grape_Acreage/201504gabtb00.pdf>

[www.Napavintners.com](http://www.Napavintners.com/History)

<http://www.thewinecellarinsider.com/california-wine/california-wine-history-from-early-plantings-in-1800s-to-today/>

countyofnapa.org/ Napacounty.org 2014 Agriculture Crop Report

2015 Napa County Crop Report

2014 Crop Report Final w Complete Errata Data FINAL.pdf

<http://www.wineinstitute.org>

<http://napavalleyregister.com/news/local/napa-grape-harvest-sets-earnings-record/article_a4413ca6-f173-56c5-ade5-a6935ee7a144.html> Grape Crop Report

http://www.winepros.org/wine101/vincyc-fume.htm

<https://en.wikipedia.org/wiki/Robert_Mondavi#Wine_history>

<http://www.winemag.com/2013/08/07/californias-zinfandel-hot-spots/>

http://iv.ucdavis.edu/files/24366.pdf

<http://www.winesandvines.com/template.cfm?section=columns_article&content=64972> (cold soak and winemaking)

Wine Folly.com

**Interviews and discussions with numerous winemakers including but not limited to:**

Kristin Belair, Honig Winery

Jon Emmerich, Silverado Vineyards

John Skupny, Lang & Reed Winery

Sheldon Richards, Paloma

Bruce Devlin, Ballentine /Three Clicks Winery

Laura Barrett, Clif Family Winery

Bill Dyer, Dyer Vineyards

Francois Bugué, Cain Vineyard & Winery