Bordeaux & the Napa Valley
Comparative Tasting & Discussion

Society of Wine Educators Annual Conference, 2016

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Connor Best, CSW, Napa Valley Vintners
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280,000 acres of vineyard

65 Appellations

Diverse Wines
Red, Dry White, Rosé, Sweet White, Sparkling

6+ times size of Napa Valley

Average Production = 5.3 million hectoliters

6460 Winegrowers
300 merchants
84 Brokers
34 Cooperatives
45,000 acres of vineyard

16 nested AVAs

Diverse Wines
Red, Dry White, Rosé, Sweet White, Sparkling

1/6 size of Bordeaux

Average Production = 0.8 million hectoliters

450 Physical Wineries
800+ wine brands
700+ growers
BORDEAUX - PLANTED VARIETIES

Bordeaux is the leading producer of Merlot worldwide.

SURFACE AREA BY RED GRAPE VARIETY:

- CABERNET SAUVIGNON: 22.5%
- MERLOT: 66%
- CABERNET FRANC: 9.5%
- OTHER RED GRAPE VARIETIES (MALBEC, PETIT VERDOT, CARMÉNÈRE): 2%

89% Red Varieties
11% white Varieties

SURFACE AREA BY WHITE GRAPE VARIETY:

- SAUVIGNON BLANC: 45%
- SÉMILLON: 47%
- MUSCADELLE: 6%
- OTHER WHITE GRAPE VARIETIES (COLOMBARD, MERLOT BLANC, CHENIN, FOLLE BLANCHE, MAUZAC, ONDENC AND UGNI BLANC): 2%
Napa Valley Planted Varieties

77% Red Grapes
23% White Grapes

- Cabernet Sauvignon: 60%
- Merlot: 14%
- Pinot Noir: 8%
- Zinfandel: 4%
- Other: 13%

- Chardonnay: 64%
- Sauvignon Blanc: 28%
- Other: 8%
BORDEAUX AND NAPA VALLEY

• Probably two of the greatest wine regions for producing Cabernet Sauvignon based wines
• Both also produce top quality wines based on Merlot and Sauvignon Blanc
• Bordeaux investment / influence in Napa Valley
  • Opus One (Mondavi and Mouton Rothschild)
  • Dominus (Christian Moueix)
  • Eisele Vineyard (Chateau LaTour)
  • Inglenook (Philippe Bascaules from Chateau Margaux)
  • Clos du Val (Bernard Portet from Lafite)
  • Pontet Canet (Villa Sorrisso)
MUTUAL INFLUENCE

• What Napa Valley learned from Bordeaux
  • Culture of making great wine – wines with refinement, balance and freshness
  • Whilst not widespread – the concept of dry farming and a non-automatic approach to acidification

• What Bordeaux has learned from Napa Valley
  • Concept of making more opulent, generous, fruit driven wines
  • Concept of making wines for earlier drinking
CLIMATE COMPARISON

• Napa Valley is warmer than Bordeaux
  • Median growing days in Yountville = 1898 days
  • Median growing days in Bordeaux is 1400 to 1500 days
• Napa Valley = more extreme climate – Bordeaux has more of a gentle changeability (gradual maritime climate)
• Climatic threats near and at harvest
  • Napa Valley = heat spikes
  • Bordeaux = rain and cold
• Bordeaux more humid than Napa
• Napa Valley has a greater diurnal difference than Bordeaux
Bordeaux

- Rainfall
  - Total annual precipitation is circa 923 mm (36.3 inches)

- Average temperatures
  - Winter = 44 °F - but recent winters have been warmer than this.
  - Summer = is 67 to 68 °F

Napa Valley

- Rainfall
  - 20-40 inches almost exclusively in winter months

- Average Temperatures
  - Winter = 40°F average low; 62 °F average high
  - Summer = 50°F average low; 85°F average high
VITICULTURE TODAY – BORDEAUX AND NAPA VALLEY

<table>
<thead>
<tr>
<th>Bordeaux</th>
<th>Napa Valley</th>
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<tr>
<td>• Greater focus on the vineyard</td>
<td>• Similar focus on vineyard and technology</td>
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<tr>
<td>• Soil mapping – ‘parcelated’ viti</td>
<td>• Commitment to sustainability</td>
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<tr>
<td>• Water management / hydric stress (impact on vintage quality)</td>
<td>• Napa Green Land and Winery Programs</td>
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<td>• More precision and sustainable viti</td>
<td>• 40% of vineyards Napa Green certified</td>
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<td>• SME/EMS: collective environmental management system</td>
<td>• 90% of County under protection from development</td>
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<td>• Organic, biodynamic – circa 7% certified</td>
<td>• Organic/Biodynamic farming is common</td>
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<tr>
<td>• BUT 45% Bordeaux vineyard certified in some shape or form</td>
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Tasting and Comparing Sauvignon Blanc Wines

Wines 1, 2, 3 and 4
SAUVIGNON BLANC

- Contrary to popular opinion Sauvignon Blanc is not likely to have originated in Bordeaux – more likely the Loire Valley.

- Savagnin possibly one of SB’s parents. DNA profiling also suggests that both Chenin Blanc and Trousseau are SB sibling. Some relationship with Semillon also suggested.

- Second most planted white variety in Bordeaux after Semillon – plantings increasing alongside the growth trend for Dry White Bordeaux.

- Second most planted white variety ion Napa – after Chardonnay

- Just over 5500 ha planted to SB – of which 4300 for dry white wine (27,000 ha planted in France)

- Innovations: 1990’s Bordeaux – Role of the late Professor Denis Dubourdieu and Andre Lurton - Discovery of the pre-cursor aroma molecules
## PLANTINGS – SAUVIGNON BLANC

### Bordeaux

- Circa 4200 hectares (10,400 acres) SB - of a total of 9280 ha of white varieties – 45%
- Most used for wines labeled as AOC Bordeaux
- Most dry white Bordeaux are blends
- Dry whites represents circa 9% of Bordeaux wine

### Napa Valley

- 4,000 hectares (10,000 acres) of white varieties – 23%
- 1,100 hectares of (2,800 acres) of Sauvignon Blanc
- 63 hectares (155 acres) of Semillon
- Most produced as dry, varietal-labeled wines
CHATEAU LA RAME BLANC SEC, 2014

- Family (Armand) property - 40 KM SE of Bordeaux city in Sainte Croix du Mont appellation.

- Soils: 20 hectares on a clay-limestone soil – sub-soils marked by a bed of fossilized oysters dating from the Tertiary era.

- Hillside vineyards overlooking the Garonne River, facing south toward river.

- Grapes for the dry white – 4 ha vineyard (circa 14% production)

- Vines: Average age 25 years, massale selection on 101-14 rootstock (5000 vines/ha)

- 100% Sauvignon Blanc, some PFM, stainless steel fermentation, natural yeast

- Unoaked – aged on lees 6 months in vats
LE PETIT COQUEREL, 2014, NAPA VALLEY

- AVA: Predominantly estate vineyard in Calistoga – Cockerell family
- Soils/viticulture: Deep clay with high water holding capacity; vigor control and canopy management are important; dry farmed except for one irrigation in early August
- Aspect: Benchland at base of Mayacamas Mountains (avoiding much of the evening sun)
- Blend: 100% Sauvignon Blanc
- Vines: ~ 10 years old
- Winemaking: Stainless and aged on lees for 9 months; weekly batonage
LES HAUTS DE SMITH BLANC, 2012

- Appellation: Pessac Léognan
- 100% Sauvignon Blanc
- Soils: Gravelly soil (outcrop of the rare Günze gravel – high iron content) with alluvial, sandy and stony deposits.
  - White varieties grown on cooler, north-facing ‘more clay’ soils
- Clone/s: Own massale selection + clones 316, 317, 906.
- Rootstocks = 3309C for more gravels soils ; 101-14 for wetter soils and Fercal for the parcels with high level of limestone
- Viti: Organic viticulture , density = 9000 vines/ha
- Hand harvested, natural fermentation in barrel (50% new)
- Aged 10 months on lees with batonnage
ST. SUPÉRY, DOLLARHIDE ESTATE VINEYARD, 2015, NAPA VALLEY

• AVA: Napa Valley (eastern hills of Napa County)

• Soils/viticulture: Tehama Silt Loam; Napa Green Land certified vineyard

• Aspect: Varied

• Blend: 100% Sauvignon Blanc

• Vines: ~ 10 years old

• Winemaking: fermentation in stainless steel and oak barrels (17% new French oak); 7 month sur-lie maturation
Tasting and Comparing Merlot Wines

Wines 5 and 6
MERLOT

• Fleshy, widely planted variety

• World’s second most planted red variety (University of Adelaide database 2010) – Cabernet Sauvignon = #1

• Like Cabernet Sauvignon, Merlot originated in Bordeaux

• A chance crossing between Cabernet Franc + Magdeleine Noir de Charente

• The most planted variety in France and in Bordeaux
  • Bordeaux has the most plantings of Merlot worldwide (almost 70,000 ha / 173,000 acres)
  • Challenge “the merlotization’ of Bordeaux

• The third most planted variety in Napa Valley
MERLOT – PREFERRED ENVIRONMENT

• Early budding and mid ripening (about 3 weeks earlier than Cabernet Sauvignon) – Bordeaux’s earliest ripening red variety

• Well suited to cooler clay-limestone soils

• Less fussy than Cabernet regarding soils and growing conditions.

• In Bordeaux it has a particular affinity with Pomerol plateau

• In Napa Valley, Merlot is found throughout the AVA often (but not exclusively) in heavier clay soils nearer the Napa river

• Favored rootstocks in Bordeaux are low vigor Riparia Gloire de Montpelier or 3309 (or some 420A to slow down ripening)

• Provides the flesh and fruit for Bordeaux Cabernet wines.
## PLANTINGS OF MERLOT

<table>
<thead>
<tr>
<th><strong>Bordeaux</strong></th>
<th><strong>Napa Valley</strong></th>
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<tbody>
<tr>
<td>• 69,500 ha (out of total 105,000 ha) – 66%</td>
<td>• 1,920 ha (4,750 acres) out of 18,000 ha – 11%</td>
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<tr>
<td>• Most associated and dominant on the Right Bank but also widely planted on Left Bank</td>
<td>• Planted throughout, but often in clay soils near Napa River</td>
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<tr>
<td>• Key variety in Bordeaux wines – adds flesh, texture, roundness to the blend.</td>
<td>• Bottled varietally or blended into Cab-based blends</td>
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</table>
CHATEAU LA POINTE, 2012, POMEROL

- Appellation: Pomerol
- Blend: 85% Merlot, 15% Cabernet Franc
- Location: large estate (22 ha – second largest in Pomerol) - sustainable viticulture
- Soils: gravelly soil with pebbles from the Isle river terraces, clay-gravel soil, sandy soil on clay and sandy soil on gravel
- Vines on 3309 rootstock and planting density is 8100 vines/ha
- Fermented mainly in cement vats with some stainless steel.
- Aged 12 months – 50% new barrique
BLACKBIRD VINEYARDS ARISE, 2013, NAPA VALLEY

- AVAs: Napa Valley (sourced from multiple vineyards)
- Blend: 55% Merlot, 30% Cabernet Sauvignon, 15% Cabernet Franc
- Soils: Primarily from vineyards with gravelly and silty clay loam; many varied depending on vineyard source
- Winemaking: 21 months in French oak, 50% new
Tasting and Comparing Cabernet Sauvignon Wines

Wines 7, 8, 9 and 10
CABERNET SAUVIGNON

- Originated in Bordeaux BUT not an ancient grape
- A chance crossing: Cabernet Franc x Sauvignon Blanc
- Cabernet Franc - origins likely go back to the Pyrenees (in Bdx thousands of years)
- Cabernet Sauvignon = the most planted black variety in the world with 300,000 ha planted
  - Only 26,000 ha in Bordeaux (64,200 acres)
  - 8,100 ha (20,000 acres) in Napa Valley
- Tends to be planted in same wine regions as Merlot
- France, and indeed Bordeaux has more Merlot than Cabernet Sauvignon
- In contrast in New World wine regions have more Cabernet Sauvignon planted than Merlot
CABERNET SAUVIGNON – ITS PREFERRED ENVIRONMENT

- Late budding and late ripening variety
- Rootstocks – low vigor – RGM, 3309 and 101-14
- Growing season temperature is very critical - needs a long growing season to ripen
  - Issue of volatile pyrazine compounds
- Produces tannic wines with great aging potential
- Bordeaux: Climate wise is at the bottom of the league of suitable places to grow Cabernet Sauvignon
- Napa Valley: long, dry and warm growing season is ideal ripening Cabernet Sauvignon
PLANTINGS OF CABERNET SAUVIGNON

**Bordeaux**

- 23,800 ha (59,000 acres) planted in Bordeaux
- Mainly on Left Bank
- Mainly in top communes of Medoc and in Graves
- Preferred soils = well drained gravels

**Napa Valley**

- 8,100 ha (20,000 acres) in Napa Valley
- Planted throughout valley with only small plantings in extreme southern areas
- Preferred soils = well drained alluvial fan and mountainside soils
CHATEAU CANTEMERLE, 2012, HAUT MÉDOC

- Fifth Growth located in commune of Macau – 91 ha under vine
- Blend: 56% Cabernet Sauvignon, 36% Merlot, 6% Petit Verdot, 2% Cabernet Franc
- Soils: Silica-gravel soils of the quaternary era
- Rootstocks: 3309-10114 Riparia Gloire
- Average age of vines: 30 years
- Vine density: 9600
- Viticulture: Sustainable
- Hand harvested, destemmed, sorted, vatting 28-30 days. Maturation for 16 months - 12 months in French oak casks (50% new oak) 4 months in vat after blending
TREFETHEN FAMILY VINEYARDS, 2013, OAK KNOLL DISTRICT

- Winery originally founded in 1880s and re-established in 1968.
- AVA: Oak Knoll District of the Napa Valley
- Blend: 93% Cabernet Sauvignon, 4% Malbec, 2% Petit Verdot and 1% Merlot
- Soils: Ancient flood plan; Cabernet Sauvignon planted in the most gravelly places
- Clones & rootstocks: Cabernet primarily planted to clone 4 with secondary plantings of clones 2 and 6; >50 rootstock/clone combinations on property
- Viticulture: Napa Green Land (sustainable); irrigation only as needed with recycled water
- Winemaking: aged 18 months in 60% French, 28% American and 12% Hungarian oak; 45% new
CHÂTEAU PÉDESCLAUX, PAUILLAC

• 5th Growth located in Pauillac

• Blend: 63% Cabernet Sauvignon, 32% Merlot, 5% Cabernet Franc

• Soils: Gravel over clay sub-soil

• Rootstocks – 3309 and RGM

• Vinification: 10 day cold soak. Vinified plot by plot (29). Extraction using délestage and pigeage. MLF in mix of vat and barrels (30%).

• Maturation: 70% new barrels for 15 months - For the first two months of barrel aging, the wine is aged on its lees
O’SHAUGHNESSY, HOWELL MOUNTAIN, 2013, NAPA VALLEY

- AVA: Howell Mountain (~1,800 feet above sea level)
- Blend: 76% Cabernet Sauvignon, 5% Malbec, 5% Merlot, 4% St. Macaire, 4% Petit Verdot, 3% Carmenere and 3% Cabernet Franc
- Soils: Tufa (mix of volcanic ash and red clay)
- Clones & rootstocks: Cabernet Sauvignon primarily Terra Rouge, 337 and 4; primary Cabernet rootstocks are 101-14, 110R and 3309
- Winemaking: aged 20 months in French oak; 80% new
THANK YOU!

Questions

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CHARACTERISTICS OF SAUVIGNON BLANC

• Early to mid-ripening, very vigorous and need low vigor rootstocks in poor soils

• 1990's – Revolution of Dry White Winemaking in Bordeaux
  • Role of André Lurton + Prof. Denis Dubourdieu
  • Identification of the compounds responsible for creating characteristic aromas in SB
  • Understanding how to harness these
    • moderate hydric stress + controlled supply of N encourages the production of aroma precursors in the grapes + reduce phenolic compound content
  • Choice of yeast strain, fermentation temps, avoiding oxidation of musts – protective winemaking
  • Lees ageing and stirring, oak/INOX maturation, cork/screwcap
Sauvignon Blanc characteristic aromas

**Origin and formation of molecules responsible for creating aromas**

- These molecules exist in the form of **non-volatile precursors** found in the grapes and therefore in the musts.
- These molecules become volatile with the interaction of a specific **enzyme**.
### ORIGIN OF CABERNET SAUVIGNON CLONES

<table>
<thead>
<tr>
<th>Clone</th>
<th>Origin</th>
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<td>15</td>
<td>AOP Bordeaux Supérieur</td>
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<td>169</td>
<td>AOP Bordeaux Supérieur</td>
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<td>Loire Valley</td>
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<td>AOP Saint-Emilion</td>
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<td>AOP Côtes de Blaye</td>
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<td>1124</td>
<td>Sanitation of clone 191</td>
</tr>
<tr>
<td>1125</td>
<td>Sanitary clone of clone 337</td>
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Table I
Weather indicators for 2015: rainfall and temperature (compared to the 1981-2010 average) and hours of sunshine (compared with the 1991-2010 average)
Data from Mérignac (Météo France)

<table>
<thead>
<tr>
<th></th>
<th>Hours of sunshine (h)</th>
<th>Precipitation (mm)</th>
<th>T°C average minimum (°C)</th>
<th>T°C. average maximum (°C)</th>
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<td>January</td>
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