

CABERNET SAUVIGNON

- First identified **1736** in France as **Vidure= Dure (hard wood) & Vigne (vine)**
- **1996** Carole Meredith with UC Davis did DNA research which showed that in late 1600's there was a spontaneous mutation of Sauvignon Blanc and Cabernet Franc.
- All Cabernet Sauvignon came from those mutated vines.
 - **Cabernet Sauvignon is a hybrid of Sauvignon Blanc and Cabernet Franc**
- It is the most widely planted red grape
- Adapts to different soils and climates
- The most successful and popular grape
- Cabernet has an abundance of tannins which overwhelm fruit flavors
 - Responds well to OAK AGING, smoothes out tannins
- **THE GRAPE** = Small, black and thick skinned; very tough skin
 - Grapes are resistant to disease and spoilage
 - Withstands rain with little drainage
 - Prone to disease in woody parts = Eutypa
- **CLIMATE** = Moderately warm, semi-arid, well drained soils, not too fertile soil
- **CHARACTERISTICS**
 - **OLD WORLD** = violets, black currants, cedar & spice
 - **NEW WORLD** = Same as old world w/ chocolate, ripe jammy berry, oak, pepper
 - **WARM CLIMATE** = black currants and black plums, eucalyptus & mint
 - **COOL CLIMATE** = little sun, premature harvest = can be weedy, vegetal or bell pepper
- Varies with region, winemaking technique, seasonal weather and bottle age
 - Bordeaux, California, Washington, Italy, Australia, Chile, Argentina, Spain, South Africa, Eastern Europe & Lebanon
- **Cabs visionaries**
 - Chateau Lafite Bordeaux
 - Mario Incisa della Rochetta (Sassicaia) Italy
 - Andre Tchelistcheff (BV Georges de Latour) Napa
 - Miguel Torres (La Gran Corona Mas la Plana Black Label) Spain

Primary Flavors (the Grape Itself)

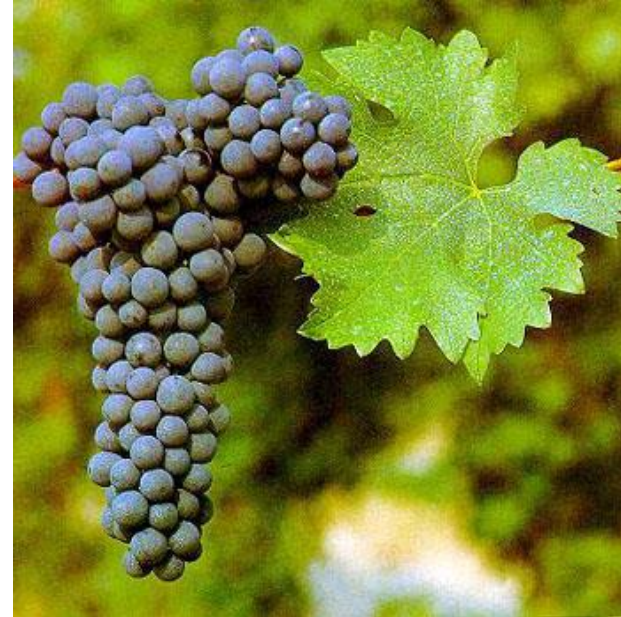
- **FRUIT** = Black currant, blackberry, black cherry, raspberry, cherry
- **HERBAL** = Bell Pepper, asparagus, green olive, mint, chocolate, eucalyptus
- **SPICE** = ginger, green peppercorn, pimento, pepper

Secondary Flavors (Oak Aging)

- **LIGHT OAK** = vanilla, coconut, sweet wood
- **HEAVY OAK** = oak, smoke, tar, toast

Tricerary flavors (Bottle Aging)

- **BOTTLE AGE** = cedar, cigar box, musk, mushroom, earthy, leather, tobacco, game, Indian spices, and fruit is more like preserved fruit



Cabernet Tid Bits

- **Medical Studies** show that Cabernet Sauvignon is beneficial for Alzheimer's Disease...resveratrol reduces levels of amyloid beta peptides which attack brain cells.
- **Picking in the Vineyard**
 - **Wine makers use three methods of seeing if grapes are ready**
 - The berries should be plump and in small clusters, skins should not be bursting open. Need tannins.
 - Juice should be sweet, they measure the Brix levels between 22-25 brix
 - The seeds should not be green when picking. Look for brown color, if green can have harsh tannins and vegetal quality
- **Oak Aging**
 - **Cabernets can be aged in stainless steel tanks or wooden barrels**
 - **Stainless Steel**
 - Usually not good for Cabs because tannins do not smoothen out, oxidation doesn't take place and wines do not age well
 - **In Barrels**
 - New wood embarks more flavor; however, more wine is evaporated and barrel needs to be topped off so it doesn't turn into vinegar
 - Barrel aging lets tannins from wood blend with tannins from wine and become harmoniously structured
 - Barrel aging = higher costs
 - » Wood is expensive
 - » Lose of juice through evaporation
 - » More time before release
- **Picking a Cabernet to drink**
 - 100% Cabs should have some age on them
 - Choose estate Cabs
 - On bad vintages some wineries blend Cab from different vineyards and you get a mediocre wine
 - Estate bottling are of that winery's best fruit
 - Estates are only bottled on good vintages
 - Vintages should have had warm weather throughout harvest; rain before picking can rot grapes
- **How Does wine age (An interaction between Oxygen and polyphenols, acids & alcohol)**
 - **Vineyard**
 - Phenolic elements come from Anthocyanins (color pigments) from the skins and Tannins which come from skins, seeds and stalks
 - Low yields cause more tannin to juice ratio, lower yields age better
 - Vine age is a factor; young vines have shallow roots and suck up more water = more juice less tannins.
 - **Winemaker**
 - Maceration, hotter and longer maceration releases more tannins
 - Amount of SO2 sulfur dioxide...used as an antioxidant and antiseptic
 - Filtration...filtered wines lose tannins
 - Oak barrels, new oak has more tannin and oak lets wine oxidate and anthocyanins and tannins join to make wines colorful and structured
 - **X-Factor** = Minerality

- **Aging of Cabernet**
 - Tannin Molecules start small in young Cabs = wine dark and astringent
 - As wine ages molecules get larger = wine gets lighter and smoother
 - Old wines molecules get so big they can no longer remain in solution = become sediment
 - Flavor molecules evolve overtime. Acids that were bonded by sugar molecules detach and influence how sweet and fruity the wine tastes
 - **IN THE BEGINNING** = Ripeness of fruit connected to sugar levels and strong aromas from toasted oak barrels
 - When 1st bottled strong flavors of chocolate, vanilla and coffee.
 - High Octane wines
 - **5 YEARS LATER** = "Closed Phase" flavors and aromas are muted or simply missing.
 - 97's can be consumed at wrong time.
 - **10 YEARS LATER** = fruit flavors are less definable; tannins are smoother and feel polished
 - **15 YEARS LATER** = Wine begin to feel leathery, acids have detached from sugars and attach to sides of mouth. Color is lighter and molecules become sediment.
 - Hidden flavors= violets, rose petals or jasmine with silkiness.
- **Recent Vintages**
 - **BORDEAUX**
 - '05 = 95-100 = a vintage when everything fell into place
 - '04 = 86-89 = wet weather
 - '03 = 95 = great, made to drink young or age
 - '02 = 86 = so-so
 - '01 = 90 = harmonious
 - '00 = 99 = benchmark wines, made for aging
 - **NAPA**
 - '04 = 90-94 = small crop like '02's
 - '03 = 85 = uneven ripeness, like '00
 - '02 = 93 = superb, dense wines
 - **CHILE**
 - '04 = 80 = cool start, warm summer, rain at harvest
 - '03 = 97 = long season, cool nights, hot days
 - '02 = 92 = dry hot summer w/ low yields
 - **WASHINGTON**
 - '05 = 90-94 = Very balanced vintage
 - '04 = 89 = Walla Walla was hit w/ hard winter
 - '03 = 92 = Hot summer w/ ripe grapes
 - '02 = 90 = age worthy, balance of cold and warm season

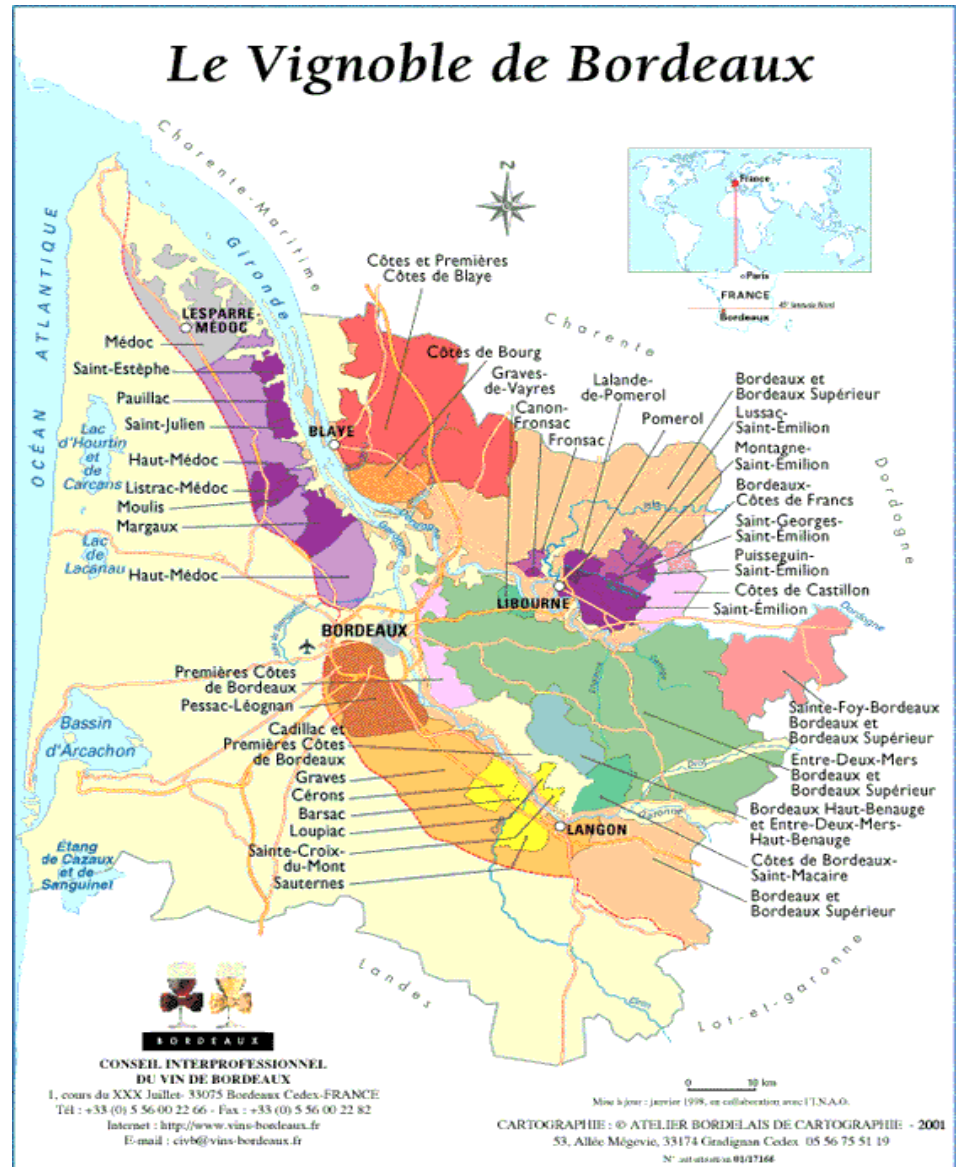
BORDEAUX

- **Bordeaux** = "Bord de l'eau" (**Along the waters**)
- The Waterways and Atlantic Ocean was the 'cause of Bordeaux's success
 - wines were able to be shipped to England
 - Waterways maintain a temperate climate
- Largest fine wine vineyards in the world...700 million bottles produced
- Home to the Cabernet Grape
- In France Cabernet Sauvignon is also known as (Bouche, Bouchet, Petit-Cabernet, Sav Rouge, Vidure)
- In south and west there is a Pine Forest which blocks bad weather
- Best Vineyards = "If you can see the water"
- English Called Bordeaux's **Clarets** = "Clair" meaning pale:
 - Wines were pale and lighter red wine, lower alcohol; as opposed to the heavier more robust reds that come from outside Bordeaux but got shipped through the same port.
 - It wasn't until the 18th century when they started using Cabernet as the base...prior to this time they used Spanish reds as the base
- The English use the term to indicate a blend: Bordeaux's are made up of **Cabernet Sauvignon, Merlot, Cabernet Franc**.
 - **Petite Verdot** is used in the Medoc
 - **Malbec** in St.Emillon and Libourne
 - **Carmenere** in some appellations
- It was because of Cabernet which led to the classification of Bordeaux and led to a wine revolution throughout the world
- Cabernet Sauvignon is the predominate grape in the appellations on the left Bank of the Gironde River

CABERNET SAUV. Gives Bordeaux's their structure = Framework of the wine = TANNINS

• THE MEDOC

- **Climate=**
 - **Maritime Climate** hot days and cooler nights from the two seas.
- **Soils =**
 - gravel, Alois (a hard iron-rich sand-stone), marl, clay or sand; Roots have to dig deep in ground to get nutrients
 - Well drained soils, flat ground, withstand heavy rain
 - Don't do too well in drought
- **Characteristics =**
 - Violets, blackcurrant, cedar and spice
 - Leaner and elegant wine
 - Earthy, barnyard, hay quality



CALIFORNIA

- 1st Cabs were planted in Los Angeles
- Most common in Napa and Sonoma
- Also has found a fondness in Paso Robles

- 600 acres of Cab in 1960's – 40,000 acres in 2000's

- 1980's "Cabernet" became coined term for red wine...similar to "Burgundy" and "Chablis"
 - It's success can be credited to collectors and snob-appeal, which led to higher prices due to the new rich and inflation

- California made it as single variety
 - 1970's Cabs were big and tannic and took 10-20 yrs to mature
 - Wineries moved to cooler regions where wines took a more vegetal quality
 - To compensate for the lack of fruit they matured heavily in oak
 - Was thought of as "varietal without faults"
 - Not true= young wines are tightly structured with unforgiving tannins
 - This led to many Californian's using the Bordeaux model and started to blend
 - They also started to not drink so young

- 1970's created **Meritage** and **Bordeaux Blends**
 - **Bordeaux Blend** = red table wine made from a blend from any of the 5 Bordeaux grapes Cab Sauv, Cab Franc, Merlot, Petit Verdot and Malbec

 - **Meritage** = "Merit and Heritage"
 - 1988 Napa wine makers created the Meritage Society and trademarked the name "Meritage"
 - The purpose was to differentiate wines from red table wines
 - Must pay to use the name...\$1/case up to \$5500
 - Must use at least 2 Bordeaux grapes w/out using more than 90% of one
 - Must be considered the wineries best wine
 - NO more than 25,000 cases of production

NAPA

Mountain vs. Valley

- 1855 BV and George Latour 1st started producing Cabernet.
- Late hot summers provide heavily textured wines with high alcohol

Mountains

The Macayamus Range on West side of valley

- Mt. Veeder, Spring Mountain, Diamond Mountain

Vacas Range on the East side of the Valley

- Howell Mountain & Atlas Peak

- **Soil** =
 - Volcanic lack of nutrients create more concentrated grapes
 - Thinner, more acidic because of more rainfall, and shallower...moderates yields naturally
 - Better drainage and natural irrigation
- **Elevation** =
 - exposed vines to atmosphere which promote more ripening and flavor intensity
 - increased levels of ultraviolet light increase the level of phenolics in grapes
- **Climate** =
 - Spring comes later and afternoons are cooler
 - Sun shines longer w/ greater intensity
 - Fog line determines the mountain fro valley 900- 1,000ft. Fog encompasses the valley in morning and afternoon through the gaps. Mountains are above fog which leads to more solar radiation and longer growing days
- **Characteristics** =
 - More longevity because of lower pH levels and higher acidity with ideal sugar levels
 - Earthy, mineral flavors; wild berry fruit, hints of spice, black pepper and dried herbs such as lavender, anise and sage.
 - Exhibit more structure

Jerry Draper Spring Mountain = "Costs more to produce mountain-grown grapes than valley-floor fruit...Another distinguishing point is the austere, coarse and complex rocky soils, often volcanic, that dominate the best mountain vineyards. These sites have excellent drainage and are, for the most part, dry farmed, with vines that are stressed to the maximum and therefore have search deep for nutrients. Longer, more balanced growing days are due to the morning sun and lack of fog that blankets the valley floor, while cool afternoon breezes moderate the hot afternoon sun. All these factors, combined with the extremely low yields, result in smaller berries and more balanced, complex and concentrated fruit."

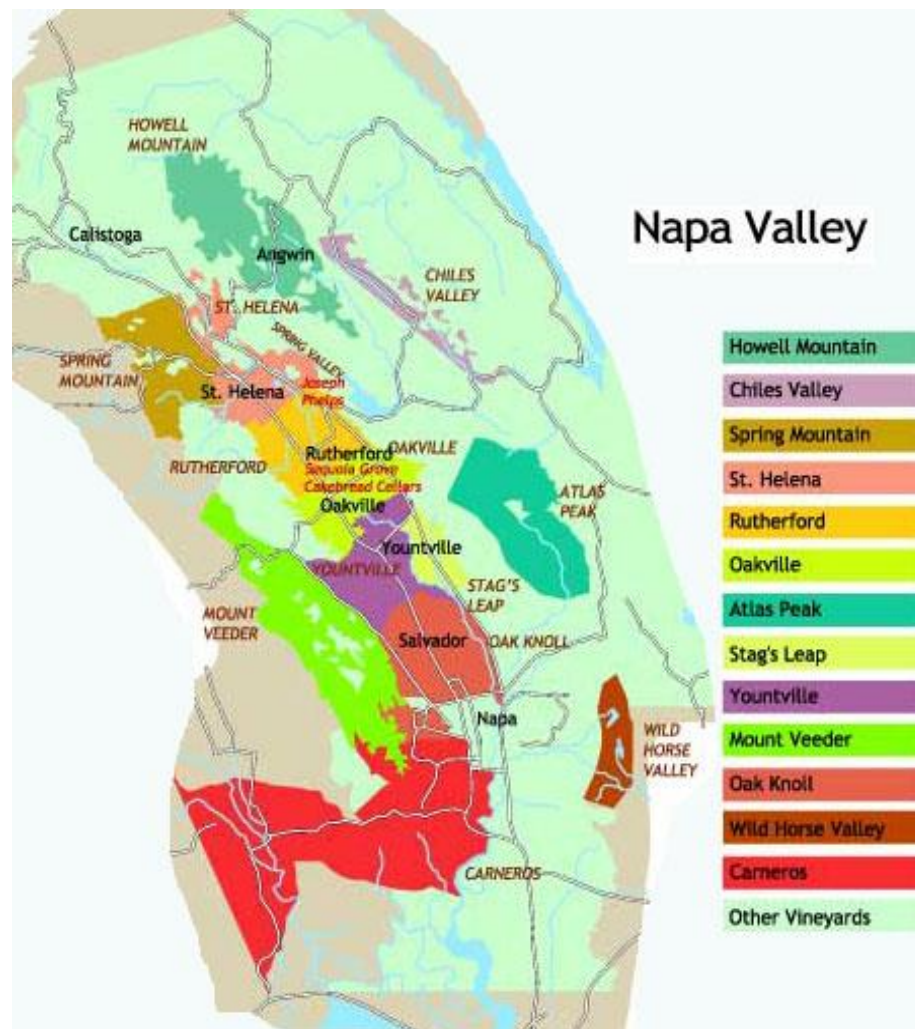
The Valley

Oak knoll, Stag's Leap, Yountville, Rutherford, Oakville, St. Helena & Calistoga

- Climate =
 - Influence from San Pablo Bay, cool wind and fog covers vineyards
 - Maritime climate sheltered by mountains.
 - Hot days cause grapes to ripen faster and harvesting begins earlier
- Soils =
 - Very diverse soils
 - Drainage is an issue when they get late rains
 - Many wineries need to irrigate
 - Alluvial fans and volcanic rocks...much of the top soil from Mountains covers the valley creating fertile soils
 - 10 alluvial fans on valley floors, each with it's own chemistry, minerals, texture and structure
 - More diversity in wines ranging from different AVA's
- Characteristics=
 - Red fruit, plums currants and blackberries often Jammy...lower acidity
 - Full, firm tannins, rich textures
 - Hints of mint and violets
 - Areas such as Rutherford have earthiness, dusty

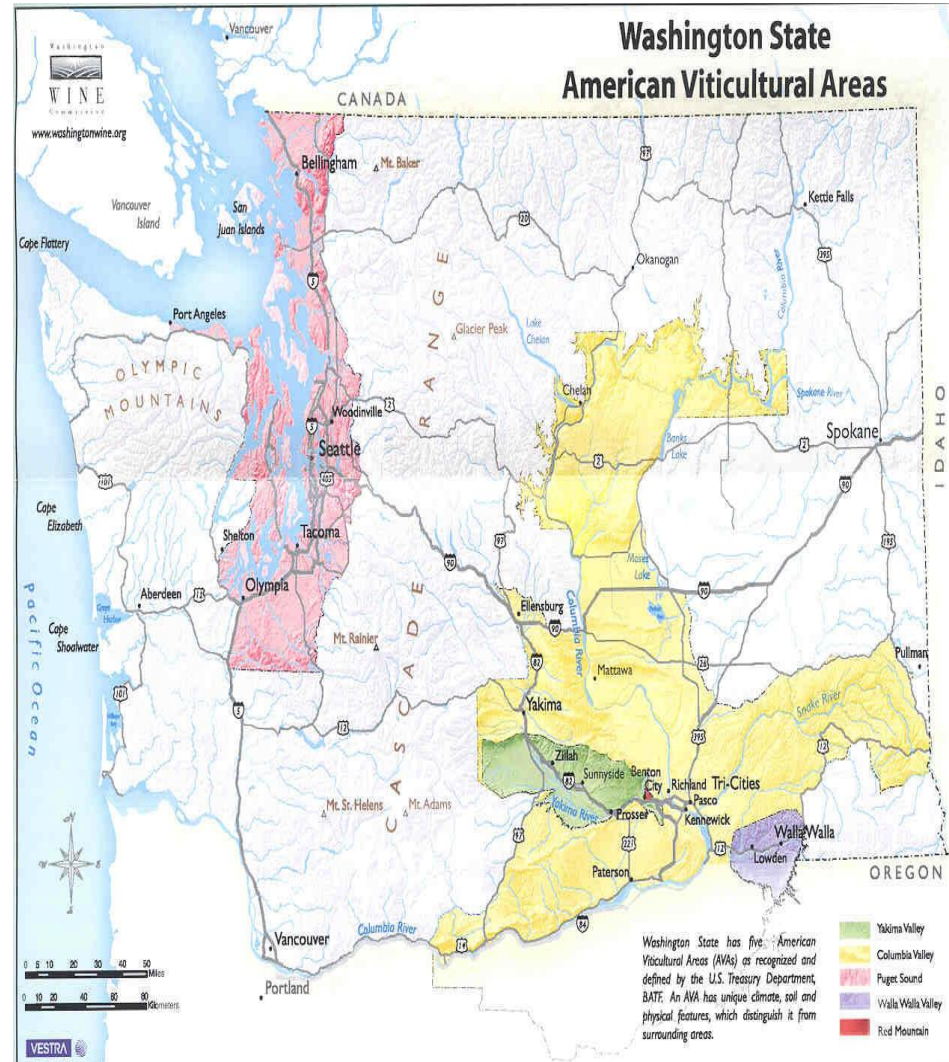
Sonoma

- Alexander Valley Cabernet is king
- Founded by Cyrus Alexander in 1842
- 80 mi. north of S.F. & 30 mi. from Pacific
- Soil=
 - valley is well drained sandy loams, created by volcanic activity in the Macayamas Range. Hillsides are gravel and volcanic rock.
 - Located east and south of Napa
- Climate: North is warmer than the south.
 - Russian river weaves through valley cooling it with fog.
 - The hot days are cooled when night time comes, with cooling breeze from Healdsburg gap.
- Characteristics=
 - Plums, Licorice, Black cherry and rich wines
 - Silver oak, Geyser peak, Lancaster, Jordan, Chat. St. Jean



WASHINGTON

- Cabernet was planted in Washington shortly after prohibition by E. B. Bridgeman
- 1960-70's Cabernet planting grew in Washington to 6000 acres
- Cabernet is more resistant than Merlot... 1996 a freeze destroyed all Merlot and Cabernets were resilient
- Cabernets here are different from Cali and France... they are planted on their own root stocks
 - Cabs get root depth, they get an old vine characteristic w/ young vines
- **Columbia Valley (11 million acres) encompasses 6 AVA's**
 - Yakima Valley, Red Mountain, Walla Walla Valley, Horse heaven Hills, Rattlesnake Hills, and Wahluke Slope
 - Columbia Gorge and Puget sound are in Washington.
- Columbia Valley is bordered by Mountain ranges in the west and north; the Columbia River borders the south
- **Soils =**
 - 15,000 years ago the Valley was created by the Missoula Floods, melted ice from ice age deposited sand and silt throughout valley
 - Wind deposited loess (Glacial deposit) and volcanic materials
 - Soils are ideal for grape vines because of good drainage
- **Climate =**
 - Continental desert climate
 - Hot days for even ripening
 - Cool nights for grapes to retain acidity
 - 6-8 inches rainfall, never a concern for too much rain as in Bordeaux, however irrigation is necessary
 - Dry climate decreases risk of fungal diseases
 - The marine climate is sheltered by the Cascade Mts. Most of the vineyards are in the eastern desert.
- **Characteristics =**
 - Washington regularly gets full ripe crops, something Cali and Bordeaux do not
 - Youthful Cabs = more subtle and restrained than Merlot... Black Currants, Cherry, Berry, Chocolate, Leather, Mint, Herbs, Bell Pepper
 - Bottle Aged = several years and the wines show their best
- **RED MOUNTAIN**
 - Sub AVA with some of the best wines
 - Taste like California with more Ripe berries, Jammier and more tannins
 - "CIEL DU CHEVAL" was voted best vineyard by Wine and Spirits



Chile

- 1st planted in 1850's by Chilean aristocrats who brought grapes and wine making techniques from Bordeaux
- Chile now grows more Cabernet than Napa or Bordeaux 100,000 acres
- Style is the elegance of Bordeaux with the fruit flavors of Napa
- Chile has seen the arrival of many foreign winemakers teaming up with local winemakers to produce astronomical Cabernets
 - E.g. Mouton-Rothschild with Concha y Toro make “Almaviva”
 - Robert Mondavi = “Caliterra”
 - Lafite Rothschild = “Los Vacos”
 - Miguel Torres = “Torres”

- It is common to blend with Carmenere
- Disease and Pest are infrequent, Chile was free of Phylloxera in 1900's

GEOGRAPHY =

- Valleys are bordered by the Cool Pacific and the Andes Mountains
- Keep valleys
- Natural irrigation from the Andes which brings water from melting snow down ancient canals built by the Incas
 - Brings water to an otherwise dry and arid land

SOILS =

- Alluvial sandy loams over stones, are calcareous or granite in origin

Climate =

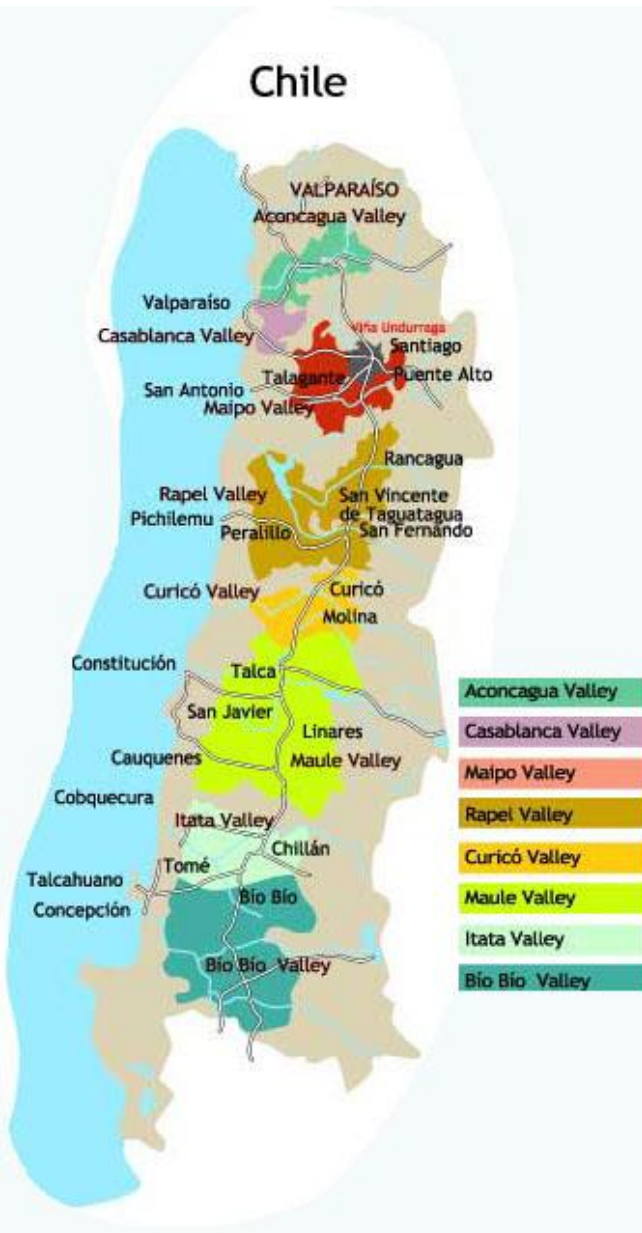
- Warm Summer days, good mix for Cab, dry soils and hot days

WINE REGIONS (divided by the canals from the Andes)

- **Aconcagua Valley**
 - Most North
 - Warmest region ripe plums and coffee flavors
 - Errazuriz Estate
- **Maipo**
 - Most similar to Bordeaux
 - Dense Reds, some of the best wineries
 - Concha y Toro & Santa Rita
- **Rapel (Colchuga is small sub-AVA to the west near ocean)**
 - In southwest, Largest region in Chile and most different soil types
 - Warmer than Maipo, wines have structure w/ robust tannins
 - Carmen, Cono Sur and Mont Gras

- Unfortunately Chile is also known for bad wines which are a result of young vines and high yields

- Hillsides are now being planted in all regions, vines are still young now but with time we should be seeing some amazing Cabernets



15-10 year



Washington

10-5 year



Chile

5-3 year

Bordeaux

Valley

Mountain