

FRANCE - BORDEAUX

HISTORY	<ul style="list-style-type: none"> • 300AD: poet Ausonius first author and winegrower (De herediolo poem in 379). Ch. Ausone named after him. • 1152: Bordeaux became under British rule. King John granted them privileges incl. tax exemption for exports. Gascon wines became cheaper, fashionable in the UK and the wine trade was kicked off by French, Dutch and German merchants (#clergy). • 14th: Bordeaux has become a major export port for the wine trade with ¼ of Bdx wines exported to Britain. • 1453: Gascony back to French rule after 100 years war and the wine trade did recover partially • 17th: development of the Dutch wine trade. The Dutch drained and planted in the Médoc to create the basis for today's fine wine region. Trade and trade wars with Britain continued. • 18th: establishment of merchants from Britain and Germany able to buy, cellar and export the 'new French clarets' w Barton & Guestier (1725), Cruse (1819) • 1852: powdery mildew hit and was only beaten in 1858 w sulphur spraying • 1855: in response to a request by Napoleon III for the world exposition in Paris, the Bordeaux brokers formalised a market ranking based on the prices fetched by the estates in Médoc, Sauternes & Barsac • 1870s-80s: Phylloxera followed by downy mildew caused a serious setback in the trade development. • 1910s: exports to Britain, Belgium and Germany were strong. • 1918-1930s: slump after WWI -> Chateaux changing hands • 1936: creation of Bordeaux AOC • 1950s: Mouton Rothschild began bottling at the estate and others followed before becoming mandatory for first class growths in 72. In parallel, modernisation and replanting of some of the top estates e.g. Ch Pétrus. • 1953 & 1955: classification of leading Graves whites & reds and St Émilions. • 1970: the growing demand of the US market led to the sale of this vintage en primeur, which changed the financial situation of Bordeaux winemakers. • 1973: energy crisis' inflation and en primeur sales meant that a lot of the merchants and leading Chateaux had to be rescued by outsiders (e.g. Axa) and multinational corporations • Late 20th/early 21st: global economic boom -> huge demand and price increase for top-end Bordeaux and overproduction of lower-end wines. 		
CLIMATE & WEATHER	<ul style="list-style-type: none"> • Moderate maritime climate similar to the south west of the UK. Viticulture possible thanks to: <ol style="list-style-type: none"> 1. The warming effect of the Gulf Stream (powerful warm ocean current from Florida) 2. The coastal pine forests on the Atlantic coast acting as wind breaks and rain barrier 3. The Gironde estuary acting as a large body of water redistributing heat at the end of the growing season Strongest maritime influence in Médoc; decreases inland. • Spring mild & damp; summers hot w occasional storms; mild autumns & winters. • 2,000h of sunshine/yr; 900mm avg rainfall (distributed evenly throughout the year); 20.5C avg temp in July • High vintage variations due different temperature and rainfall year on year. 		
TOPOGRAPHY & SOILS	<ul style="list-style-type: none"> • Located on the French Atlantic coast with vineyards stretching from the Gironde Estuary and alongside the Garonne and Dordogne rivers. • Varied soils but mainly: <ol style="list-style-type: none"> 1. Left bank: gravels, sand and clay. Gravelly soils of Médoc help regulate water supply to the vine. 2. Right bank: limestone, clay and sand. St-Émilion famous for limestone plateau. 3. Entre-deux-mers: clay and limestone • Best vineyards in Haut Médoc, Pessac Léognan (well drained gravelly soils), St Émilion and Pomerol (limestone or clay) • Low altitude area (max 100m) 		
GRAPE VARIETIES	<ul style="list-style-type: none"> • Marginal limit for growing these (red) varieties but would lose subtle aromas, elegance & style elsewhere. <table border="0" style="width: 100%;"> <tr> <td style="vertical-align: top; width: 50%;"> <p><u>Reds (88% of plantings)</u></p> <ol style="list-style-type: none"> 1. Merlot (56% of plantings) <ul style="list-style-type: none"> - One of the most planted dark-skinned grape in the world; most planted in France - Progeny of Cabernet Franc grape; early flowering (-> colour risk), prone to rot - Responds better to damp, cool soils (e.g. St Émilion, Pomerol and Entre-deux-Mers) that retain moisture. Dry summers in well drained soils can lead to under-ripeness - Higher yielding in moderate climates - Often blended w half brother Cab Sauv & Cab Franc - Typically dominant in Right bank blends - Medium body & tannins, adds smoothness to blend 2. Cabernet sauvignon (20%) <ul style="list-style-type: none"> - Progeny of Cab Franc & Sauv Blc - Believed to have emerged as a spontaneous crossing in the Bordeaux vineyards in the 18th - Small-sized berries w concentrated phenolics - Ageing potential and affinity for oak - Moderate yields; deep coloured, tannic full-bodied wines w blackcurrant aromas. - Typically dominant in Left bank blends </td> <td style="vertical-align: top; width: 50%;"> <p><u>Whites (12% of plantings)</u></p> <ol style="list-style-type: none"> 1. Sémillon (6%) <ul style="list-style-type: none"> - Thin-skinned golden grape variety - Easy to cultivate: vigorous, fairly resistant to coulure or diseases - Thin skin -> Prone to noble rot - Low acidity and oily texture - Often blended w Sauv Blc in dry wines (Graves) adding richness, colour and honeyed flavours and in sweet unfortified wines (Sauternes, Barsac) adding botrytis flavours, colour 2. Sauvignon blanc (5%) <ul style="list-style-type: none"> - Green-skinned grape variety from Bdx - Buds early and ripens early - Vigorous vine (-> use of low vigour rootstock + canopy management) - Grassy, green fruits, elderflower w fresh acidity 3. Muscadelle (1%) <ul style="list-style-type: none"> - Minor constituent in sweet white wines - Used almost exclusively in blends to add fruitiness (grapey aromas) and perfume. <p>Others: Ugni blanc, Colombard, Merlot blanc</p> </td> </tr> </table>	<p><u>Reds (88% of plantings)</u></p> <ol style="list-style-type: none"> 1. Merlot (56% of plantings) <ul style="list-style-type: none"> - One of the most planted dark-skinned grape in the world; most planted in France - Progeny of Cabernet Franc grape; early flowering (-> colour risk), prone to rot - Responds better to damp, cool soils (e.g. St Émilion, Pomerol and Entre-deux-Mers) that retain moisture. Dry summers in well drained soils can lead to under-ripeness - Higher yielding in moderate climates - Often blended w half brother Cab Sauv & Cab Franc - Typically dominant in Right bank blends - Medium body & tannins, adds smoothness to blend 2. Cabernet sauvignon (20%) <ul style="list-style-type: none"> - Progeny of Cab Franc & Sauv Blc - Believed to have emerged as a spontaneous crossing in the Bordeaux vineyards in the 18th - Small-sized berries w concentrated phenolics - Ageing potential and affinity for oak - Moderate yields; deep coloured, tannic full-bodied wines w blackcurrant aromas. - Typically dominant in Left bank blends 	<p><u>Whites (12% of plantings)</u></p> <ol style="list-style-type: none"> 1. Sémillon (6%) <ul style="list-style-type: none"> - Thin-skinned golden grape variety - Easy to cultivate: vigorous, fairly resistant to coulure or diseases - Thin skin -> Prone to noble rot - Low acidity and oily texture - Often blended w Sauv Blc in dry wines (Graves) adding richness, colour and honeyed flavours and in sweet unfortified wines (Sauternes, Barsac) adding botrytis flavours, colour 2. Sauvignon blanc (5%) <ul style="list-style-type: none"> - Green-skinned grape variety from Bdx - Buds early and ripens early - Vigorous vine (-> use of low vigour rootstock + canopy management) - Grassy, green fruits, elderflower w fresh acidity 3. Muscadelle (1%) <ul style="list-style-type: none"> - Minor constituent in sweet white wines - Used almost exclusively in blends to add fruitiness (grapey aromas) and perfume. <p>Others: Ugni blanc, Colombard, Merlot blanc</p>
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<p>GRAPE VARIETIES (CTD)</p>	<p>3. Cabernet Franc (10%)</p> <ul style="list-style-type: none"> - Black grape - Co-parent of Cabernet Sauv with Sauvignon Blc - Well suited to cool inland climates - Buds, matures earlier -> easier to ripen fully vs. Cab Sauv - Less susceptible to poor weather at harvest - Lighter in colour, the wines have berry fruits flavours, unobtrusive tannins and higher acidity vs. Cabernet Sauvignon - Earlier maturing vs. Cab Sauvignon <p>4. Petit Verdot (1%)</p> <ul style="list-style-type: none"> - Late ripening thick-skinned black grape variety - Deep colour, hi tannins and spicy - Enjoying a revival in quality conscious vineyards - Only in the riper vintages <p>5. Cot/Malbec (1%)</p> <ul style="list-style-type: none"> - Sensitive to coulure, frost, downy mildew and rot - Usage decreasing. Used from early drinking reds.
<p>VITICULTURE</p>	<ul style="list-style-type: none"> • 110,000ha - largest area under vine for AOP in France In sharp decline since 2004 due delayed adjustment to lower demand combined w Bordeaux plan to encourage lower yields, voluntary uprooting and sell excess production as VdP de l'Atlantique. • Concentration of ownership with: <ul style="list-style-type: none"> - Avg holding going from 5ha in 87 to 14.5 in 2011 - 23% biggest vineyard owners own 64% of vineyards • Key hazards: harvest rain, spring frost, water stress and grey rot. • Guyot training system: single (St Émilion) or double (Médoc) w vine density from 4,500 to 10,000 vines/ha • Careful replanting allows for hi average age in best Chateaux. • Majority of vineyards harvested by machine excl. for sweet wine for bunch selection • <u>Faculté d'oenologie de l'Université de Bordeaux:</u> <ul style="list-style-type: none"> - Founded in 1880 - Oenologists have worked closely w this research centre e.g. Émile Peynaud who then influenced winemakers to better control fermentation temperatures and MLF; also Michel Rolland, advocate of super-ripeness
<p>WINEMAKING</p>	<p><u>Red wine vinification</u></p> <ul style="list-style-type: none"> • Classic quality red wine vinification includes: <ul style="list-style-type: none"> - In vineyard: <ul style="list-style-type: none"> ▪ Green harvest ⇨ sugar concentration ▪ Systematic destemming ▪ Fruit selection at harvest and in the winery before crushing ⇨ better quality - In the winery: <ul style="list-style-type: none"> ▪ Chaptalisation / <i>reverse osmosis</i> (i.e. removal of water from unfermented grape must) in better chateaux ⇨ denser wines with higher alcohol esp. in lighter years ▪ Fermentation and maceration for up to 3 weeks in large 'cuve' made from oak, concrete or stainless steel at slightly higher temperature vs. New World (max 30C) using ambient yeasts. Extraction during fermentation via pumping over several times a day Potential addition of stalks for more tannins. Grape varieties fermented separately. ▪ Post-fermentation maceration for up to 1 week ▪ Wine racked in barrels before/after MLF of 225l-Limousin oak barriques ▪ Ageing: 0-24 months ▪ Wine racked off its lees into fresh barrel every 3 months and fined with egg whites in the first year and then moved to a separate chai for final ageing before bottling. ▪ Blending done in first few months after fermentation or at bottling. <p><u>White wine vinification</u></p> <ul style="list-style-type: none"> • Dry whites <ul style="list-style-type: none"> ▪ Use of <i>cryomaceration</i>/macération pelliculaire i.e. skin contact at low temperatures before fermentation for more flavours ▪ Long & cool fermentation in traditional oak or stainless steel at 15-20C to retain flavours ▪ Barrel maturation for the upper echelons (Graves / Pessac Léognan) common for decades ▪ Traditional high doses of SO₂ in finished dry wines • Sweet whites <ul style="list-style-type: none"> - Moelleux <ul style="list-style-type: none"> ▪ Fermentation stopped via chilling, SO₂ and sterile filtration. - Liqueureux (Sauternes, Barsac) <ul style="list-style-type: none"> ▪ Must weight, physiological ripeness and botrytis levels determine the quality of wine ▪ <i>Cryoextraction</i> (freshly picked grapes frozen for stronger sugar concentration and pressed immediately afterwards) used by Ch. d'Yquem in poor vintages (e.g. 87) ▪ Pressing as gentle as possible in hydraulic or basket presses ▪ Fermentation in tanks or barriques (of which 1/3 new) until 14% abv reached (natural stop or via SO₂). ▪ Chaptalisation is permitted in weaker vintages but better estates avoid the practice ▪ Ageing in oak barrels for 18-36mths with up to 100% new oak.

In all Bordeaux classifications, it is the property that is classified (e.g. 1st growth/GC Classé A) and not the land as in Burgundy (i.e. Clos Vougeot is the GC not the producer)

1. Médoc and Sauternes: the 1855 Classification

- Following a request by Napoleon III in preparation for the 1855 Universal Exhibition in Paris, the Bordeaux Syndicat des Courtiers ranked wines using decades of trading statistics.

a. Médoc

▪ 60 Chateaux from the Médoc and one (Chateau Haut-Brion) were ordered in five different grades according to commercial value:

First growth (x5):

- I. Chateau Haut-Brion
- II. Chateau Latour
- III. Chateau Lafite
- IV. Chateau Mouton-Rothschild (since 73 only)
- V. Chateau Margaux

Second growth (x14) / Third growth (x14) / Fourth growth (x10) / Fifth growth (x18)

▪ The classification only changed once (to promote Mouton from 2nd to 1st growth) since 1855 so some Chateaux have been more deserving of their status than others. For example, the Margaux wines from Ch. Rauzan-Gassies (2nd growth) have been far less consistent in quality vs. Chateau Palmer (3rd growth)

b. Sauternes

▪ Similar to Médoc with 26 Chateaux in Sauternes (incl. Barsac) ranked 1st or 2nd growth.
 ▪ Chateau d'Yquem was singled out as Premier Cru Supérieur above the 11 first growths and 14 second growths

2. Médoc Cru Bourgeois: from classification (1932, 1978, 2003) to label of quality (2007)

- 1932: classification created for other quality chateaux from Médoc appellations that missed out on the 1855 classification. 444 chateaux listed.

- 2003: 78 chateaux excluded were excluded. Accusations of partiality -> legal complaints.

- 2007: the term Cru Bourgeois was annulled and deemed illegal

- 2008: classification re-instated with the following basis:

- Cru Bourgeois is a designation of quality
- Qualification determined by visit to the property and tasting by independent panel.
- Qualification awarded annually and awarded by a independent organisation
- Any estate in the Médoc can apply

3. Graves the 1959 Classification

- No hierarchy -> all wines are 'Cru Classé'

- 16 Chateaux classified with 13 reds and 9 whites (NB: Includes Ch Haut-Brion)

4. St Émilion classification (1955, 1996, 2006, 2012)

a. St Emilion AC

b. St Emilion Grand Cru AC with:

- Straightforward Grand Crus (~600 chateaux)
- Grand Cru Classé (64 Chateaux in 2012)
- Premier Grand Cru Classé (18 Chateaux in 2012) with:
 - 14 x Grade B Chateaux
 - 4 x Grade A Chateaux (Angélus, Ausone, Cheval Blanc, Pavie)

- The classed growths (i.e. Grand Cru Classé + Premier Grand Cru classé) reviewed every 10 years or so.

- 2006: ruling faced legal complaints and was annulled.

- 2012: new classification based on terroir, estate mgt & tasting, independently verified. Contention growing.

5. Garage wines (unclassified)

- Top wines produced in tiny quantities by microchâteaux from low yields & super-ripe grapes (Parker influenced)

- Wines are full bodied, concentrated w moderate acidity, soft tannins and rich, complex berry fruit

• **La Place de Bordeaux** (Producers -> courtiers -> négociants -> export/shippers):

- Historically, merchants or négociants bought wine in bulk, blended it and aged it in their cellars (e.g Quai des Chartrons)
 - Nowadays, the role of merchants has evolved to the one of broker/courtier.

a. Courtiers

- Paid by négociants to submit samples from producers, obtain best price & manage legalities around transaction
- Usually specialised in a specific area with close relationships with the producers

b. Négociants

- Buys, blends and sells generic wine in bulk or bottle
- Buys individual Chateau wines to sell either in bulk or bottle
- Buys individual Chateau wines to release and sell at different maturity levels

• **Chateaux, Microchateaux & Petits Chateaux**

- *Chateaux*: may be used by a wine estate only of a specified plot or collection of plots i.e. no need for physical chateau to use the term (e.g. Ch Léoville-Barton has no chateau); cooperatives could use the term too.

- *Microchateaux*: unofficial term to designate Bordeaux right bank miniature estates producing ultra-modern wines (deep coloured, early-maturing, sweet, oaky) produced in small quantities, often under the influenced of oenologist Michel Rolland. Le Pin in Pomerol (1ha) is the archetype.

- *Petits Chateaux*: estates w modest reputation and price; mainly under Bordeaux, Bourg or Cotes de Bdx ACs

• **Bordeaux wine buying**

- Before release: either En souche (before harvest) or En primeur 1st or 2nd offer – 1st yr after vintage from late March
 En Primeur: stock on pre-sale March after harvest by top Chateaux to free up cash tied up in stock. Finished wines released to buyer 2 years after harvest.

- After release by hl (e.g. road tanker), 900l tonneau, 225l barrel, by case.

1. Bordeaux AC (R/W/R) – 50,000ha

- **Largest production of AC wine in France**; represents 60% of all Bdx reds and 40% of whites
- Most of the volumes comes **mainly from Entre-deux-mers, cooperatives and petits chateaux**
- Most of the Bordeaux brands (e.g. Mouton Cadet) are Bordeaux ACs.
- Covers top quality wines such as Le Pavillon blanc from Margaux and dry whites from Sauternes.
- Most Bordeaux AC is relatively low in alcohol with min 10% abv and most finished wines 11-12.5%
- Medium bodied w blackberry / cedar flavours, some w astringent tannins & unripe flavours to be drunk young.
- *Bordeaux Supérieur AC*: Bordeaux AC +0.5%; mainly reds but can be white.

2. Left bank

- West and South of the Gironde and Garonne (Médoc to Sauternes).
- Typical left bank blend is 75% Cab Sauv + 25% Merlot
- 12 key appellations:
 - **Médoc AC (R) – 5,000ha / 37m btls**
 - North of St Estephe; soils predominantly clay with some gravel but not as well-drained and heavier
 - The wines, mostly from Merlot, can be earthy, rustic and even a bit lean.
 - Most of the wines are sold in bulk to co-operatives or the Bordeaux trade for generic wines
 - Some quality wines from individual Chateaux e.g. Potensac, Les Ormes Sorbet and Vieux Robin
 - **Haut-Médoc AC (R) – 4,500ha / 30m btls**
 - South of St Estephe down to the outskirts of Bordeaux; gravel soils
 - Lower yields permitted and higher minimum planting density vs. Médoc AC
 - Best wines have same deep colour, concentration and ageing potential of classed growths
 - Includes 6 communal appellations (St Estephe, Pauillac, St Julien, Lustrac, Moulis, Margaux)
 - **Saint-Estephe AC (R) – 1,200ha / 8.3m btls**
 - Most northerly communal appellations of Haut-Médoc; gravel soils but also limestone and clay
 - More poorly drained soils are cooler and can delay ripening -> generally higher acidity grapes
 - Deep coloured wines, full of extract, austere in youth but w ageing potential. Styles softened with more Merlot being planted and concentration techniques (including reverse osmosis)
 - 54% of Crus Bourgeois, 20% classed growths and 17% for the only cooperative in the area
 - Chateau Cos d'Estournel and Chateau Montrose count amongst the top estates
 - **Pauillac AC (R) – 1,200ha / 8.1m btl**
 - Located between Pauillac and St Julien; deep gravelly soils and close proximity to Gironde.
 - Cabernet Sauvignon territory w powerful concentrated, long-lived reds
 - 3 of the 5 first growths: Latour (classic style w Cab Sauv from gravelly soils) Lafite, & Mouton-Rothschild
 - **Saint Julien AC (R) – 900ha / 6m btls**
 - Comprised of 2 well-exposed & well-drained gravelly plateaux on Gironde estuary; smallest of Médoc's top 4
 - Cabernet Sauvignon dominates plantings but wines show more mellow fruit and balance
 - 80% of vineyards owned by 11 high profile Chateaux committed to high level of quality
 - No first growths but 5 second, 2 third and 4 fourth growths that represent 80% of St Julien production
 - **Margaux AC (R) – 1,500ha / 9m btls**
 - Largest, most southerly & most isolated communal appellation; encompasses 5 villages incl. Margaux
 - Varied soils (limestone, chalk, clay and sand) but fine wines mostly from gravelly soils
 - Best have the deep colour, structure of top Médoc w a silkier texture and elegant perfumes
 - Several Chateaux failed to keep up with quality improvements. Ch. Margaux was revived in 78 and Ch. Palmer has been consistently good.
 - **Lustrac AC (R) – 650ha / 4.8m blts**
 - Cool limestone-clay soils -> Merlot more planted vs. Cabernet Sauvignon; slightly higher yields permitted
 - Dominated by the Lustrac cooperative but also 20 chateaux incl. Rothschild's Chateau Clarke
 - **Moulis AC (R) – 600ha / 4m btls**
 - Smallest communal appellation; high proportion of limestone and clay soils + some gravel to the east
 - No classed growths; Best wines from Cru Bourgeois e.g. Ch Chasse Spleen
 - **Graves AC (W/R) – 3,000ha / 24m btls**
 - Large region extending 50km south of Bordeaux along the left bank of the Garonne;
 - Only region equally famous for whites & reds. Whites on sandy soils and Reds on gravelly soils
 - Cabernet-dominated wines are lighter in body and quicker maturing
 - Graves supérieur is another appellation for sweet wines.
 - **Pessac-Léognan AC (R/W) – 1,600ha / 9m btls**
 - Created in 1987 for the most celebrated part of the Graves district, directly south of the town of Bordeaux
 - Most urban wine area in Bordeaux; mostly red wine production
 - Home to only 1855 first growth outside of Médoc: Chateau Haut Brion
 - **Sauternes AC (Sweet wines only) – 1,700ha**
 - Small area within the southern tip of the Graves area, along the Garonne river, 40km away from Bordeaux; covers 5 communes incl. Sauternes and Barsac
 - Specific mesoclimate w all communes close to two rivers (Ciron & Garonne). In the Autumn, the cool spring-fed Ciron meets the warmer Garonne -> evening mist form and linger until late morning when the sun burns them away
 - Requirements: max 25hl/ha yields (Yquem 9hl/ha), min 13% abv; pass taste test; from Sémillon / Sauvignon Blanc / Muscadelle; chaptalisation permitted in weaker vintages
 - Sémillon typically 80% of the blend. Sauvignon blanc brings acidity & freshness. Muscadelle for aromatics
 - Very costly to make due to time consuming and labour intensive harvests

- **Barsac AC (Sweet wines only) - 540ha**
 - Unique situation amongst the 5 Sauternes communes with proximity to Ciron river and alluvial soils
 - Lighter and more elegant wines vs. Sauternes
 - Can be registered as Sauternes or Barsac
 - Chateaux Climens, Coutet and Doisy-Daene count amongst the top estates.
- 3. Between the Garonne and Dordogne**
 - **Entre-Deux-Mers AC (W) – 1,600ha**
 - Located between the Garonne and Dordogne; largest wine-making area of Bordeaux
 - Clay and sandy soils prevail; most vineyards used the Lenz Moser high vine trellising system
 - Dry whites mainly from Sauvignon blanc usually blended with Sémillon, Muscadelle & Ugni blanc
 - 2nd largest dry white AC after Bordeaux AC w around 100,000hl/yr
 - NB: reds from the area not allowed in AC -> sold under Bordeaux AC
 - **Sainte Croix du Mont (Sweet whites) – 425ha**
 - Area in the south of Entre-deux-mers facing Barsac and Sauternes
 - **Premieres Cotes de Bordeaux (R)**
 - Right bank of the Garonne, north of Ste Croix du Mont; part of Cotes de Bordeaux since 2007?
 - Formerly renowned for sweet whites; now reds mainly from Merlot, blended w Cab Sauv and Franc
 - Fruity, medium-bodied wines to be drunk within 3-5 years
- 4. Right bank**
 - Right bank of the Dordogne and the Gironde.
 - Mostly limestone and clay soils suited more for Merlot and Cabernet Franc.
 - Typical right bank blend: 60% Merlot 30% Cabernet France 10% Cabernet Sauv (Ch. Pavie)
 - 10 key appellations:
 - **Saint Emilion AC (R) – 5,500ha**
 - East of Libourne, around the town of medieval town of St Émilion; declared World Heritage by UNESCO in 99
 - Winemaking area that precedes Médoc and important shipping wine down the Dordogne river in the Middle Ages via its port Pierrefite nearby.
 - One of the most intensive monocultures in Bordeaux (vines everywhere)
 - Myriad of soils (up to 17 terroirs identified) but 5 main types of soils:
 - i. The limestone Plateau -> most top vineyards e.g. Clos Fourtet
 - ii. The Cotes: slopes off the Plateau made of clay-limestone -> Ch Ausone, Ch Pavie
 - iii. The Graves: gravelly, pebbly soils in the northwest, bordering w Pomerol -> Ch Blanc / Ch Figeac
 - iv. The Sables: sandy plateaus west and east of town-> lighter + less long lived
 - v. The Dordogne plain: alluvial gravels directly below town-> lighter + less long lived
 - Merlot represents 60% of the plantings
 - Wines are aged in oak, rich in tannins, red berry fruit developing to tobacco & cedar w age.
 - **Saint Émilion Grand Cru AC**: same geographical delimitations but higher min abv, lower yields and approval by tasting panel required. Represent 65% of production.
 - Own classification system; key estates include Chateau Ausone, Angélu and Cheval Blanc.
 - **Lussac / Montagne / Puisséguin / Saint Georges Saint Émilion AC (R) – 3,900ha**
 - 4 villages constitute the northern extension of St Emilion hills & can add 'St Émilion' as a suffix
 - Same limestone-clay soils but later ripening cycle so autumn weather more critical
 - Wines are Merlot-dominated, slightly more rustic
 - Numerous small producers but the cooperative Les producteurs réunis represents 40% of Lussac and 20% Puisseguin production. Montagne-St Emilion largest division.
 - **Pomerol AC (R) – 800ha**
 - Directly north-east of Libourne and North-west of St Emilion
 - No limestone but gravel, sand and clay -> early ripening zone for Merlot (80% of plantings)
 - Wines are richer w spicy, blackberry flavour.
 - All top Chateaux e.g. Petrus, Lafleur are on the central plateau (clay and gravel soils)
 - Production mostly by small estates (avg holding 6.5ha) that command premium prices.
 - Only major wine district with no classification system
 - **Fronsac AC (R) - 1,100ha & Canon-Fronsac AC (R) – 300ha**
 - North-west of Libourne; triangular area between Isle river (east) and Dordogne (south)
 - Formerly regarded as top area along w St Emilion but never fully recovered post-phylloxera
 - Hilly terrain most from clay and limestone
 - 78% Merlot makes full bodied & tannic reds that can be astringent and rustic if not well made
 - Canon-Fronsac is generally south-facing i.e. w better potential but variable results.
 - **Cotes de Bourg AC (R/W) -3,900ha**
 - On the right bank of the Gironde opposite Margaux
 - Hilly limestone and clay terrain w slightly warmer climate and one of the lowest rainfall in the region
 - Merlot dominates the plantings and wines are usually blended, occasionally w Cot/Malbec (6% of plantings) that gives liquorice notes to the winess
 - The red wines are full-bodied and firm w earthy fruitiness. A small proportion of white wines is made from Ugni blanc and Colombard.
 - Top estates include Chateau Roc des Combes and Chateau Fougas.
 - **Cotes de Bordeaux AC**
 - Group of 4 appellations: Blaye, Premieres Cotes de Bordeaux, Cotes de Franc & Cotes de Castillon since 07
 - Similar geography, climate on the right bank. Merlot dominated.

VINTAGES

- Outstanding vintages: 2000, 2005, 2009 (rich, plush), 2010 (fresher, more angular)
- Good vintages: 2001, 2003 (hot, atypical new world style wines), 2004, 2008
- Average vintages: 2002 (wet)

PRODUCTION

- **#1 AOP area under vine in France** before Rhone (110,000ha)
- 5.5m hl/yr of AC wine with:
 - 90% reds and 10% white
 - 50% made from Bordeaux reds and only 12% from the top Left/Right bank ACs
- **Bordeaux exports**
 - 2/3 of Bordeaux wines are exported with now less than half going to the EU
 - China biggest export market since 2010 w hi volume (nearly ½m hl) & value (€350m)
 - UK is #4 with 250,000hl imported of mainly higher value bottles (€300m). Even more premium for Hong Kong
- Cooperatives represent 25% of production
- Slow move towards branding and marketing strategies following increased competition on international markets
Key brands:
 - **Mouton Cadet**
 - Most successful Bordeaux w 15m btl/s sold/yr; created in 1930 (poor vintage) as a second wine
 - The success of this wine forced de Rothschild to turn to neighbours for grapes the following years
 - Initially sold as Pauillac but eventually as Bordeaux AC since 47. Now fruit mainly from Entre-deux-mers
 - Range: reds incl. Réserve Médoc / St Emilion, rosé, white incl. Réserve white Graves and Réserve Sauternes. The reds are mainly Merlot w 6-10mths ageing, whites mainly Sauvignon blanc w 4mths ageing
 - **Malesan**
 - 2nd biggest selling Bordeaux brand w 12.7m btl/s/yr; owned by Groupe Castel since 03; reds/rosé/whites
 - **Baron de Lestac**
 - 3rd biggest selling Bordeaux brand w 9m btl/s/yr, also owned by Groupe Castel. Produces a red and white Bordeaux AC from typical Bdx varieties and 'Les Hauts de Lestac' sold as higher end Haut-Médoc AC
- Key estates:
 - **Chateau Potensac – Médoc**
 - 57ha run by the Delon family (who also owns Ch. Léoville Las Cases);
 - One of the Crus Bourgeois Exceptionnels in the then banned 03 listing
 - Very dark wines, rounded & spiced w cedar notes and ageing potential
 - **Chateau Cos d'Estournel – St Estephe**
 - 2nd growth estate adjacent to Chateau Lafite founded in 1811 & run by the Ginestet/Prats families since 70
 - 65ha with 60% Cabernet Sauvignon and 40% Merlot (slightly higher vs. other Left bank)
 - Rich, dense, finely textured grand vin. 2nd wine: Les Pagodes de Cos introduced in 94.
 - **Chateau Lafite-Rothschild – Pauillac**
 - 1st growth; One of the largest Chateaux w 100ha north of Pauillac planted in late 17th
 - Prestigious image built in 18th via le Marquis de Ségur, who improved winemaking techniques and counted Thomas Jefferson amongst its customers and advocates
 - After a period of Dutch ownership w further improvements, it was by French banker Baron James de Rothschild in 1868; now under direction of Eric de Rothschild since 74
 - One of the most expensive wine in the world (05: ~£10k/case). 70% of Lafite wines in China deemed fake.
 - **Chateau Léoville Las Cases – St Julien**
 - (Super)2nd growth estate of 97ha; flagship of St Julien; largest part of the former Léoville estate (split in 3 after the French Revolution) awarded to the Marquis de las cases. Now run by the Delon family
 - The vineyards are very close to the Ch. Latour 1st growth in the north.
 - Very strict quality management for wines that are firm, deep coloured, Cabernet-based.
 - **Chateau Margaux – Margaux**
 - 1st growth and most important wine estate of Margaux; 262ha w 87ha eligible for Margaux AC
 - Estate dates back from 12th century but significant wine production started in 16th and prestige built in the 18th with auctions at Christie's and praise by Thomas Jefferson. Now run by Corinne Mentzelopoulos
 - Typical blend is 75% Cab Sauv, 20% merlot, 2.5% Cab Franc, 2.5% Petit verdot for the red
 - Range: Grand vin, Pavillon rouge and Pavillon Blanc (Sauv Blc classed as Bordeaux AC)
 - **Chateau Palmer - Margaux**
 - Consistently overachieving 3rd growth 52ha estate w 47% Cab Sauv, 47% Merlot 6% Petit Verdot
 - Alter Ego de Palmer (≠2nd wine) made from same quality terroir but different assemblage for earlier drinking
 - **Chateau Chasse Spleen – Moulis**
 - Longstanding leading cru bourgeois of Moulis and winemaking estate since 1560; now run by Claire Villars
 - Underwent great improvements in the early 80s with the help of Émile Peynaud.
 - 80ha dominated by Cab Sauv (73%), Merlot (20%) and 7% Petit Verdot.
 - **Chateau Haut-Brion – Pessac-Léognan**
 - Only 1st Growth non-Médoc; most famous property in Graves district;
 - Estate build in the 16th; prestige since 17th now run in tandem w Ch La Mission Haut Brion by the Dillon wines
 - 48ha with 45% Merlot, 44% Cabernet Sauv, 10% Cabernet Frc & 1% Petit Verdot
 - Vineyards slightly elevated (27m) on gravel and some clay w warmer microclimate -> early ripening
 - Range: reds (1er cru and Le Clarence de H-B) and 2 whites. Clarendelle as Bordeaux brand since 03.

○ **Chateau d'Yquem - Graves**

- Superior 1st growth in Graves district; chateau dates back from the 15th; makes botrytised wines since 19th
- 126ha (only 100ha in production at one time) located on a small hill w 80% Sémillon and 20% Sauv Blc
- Extremely low yields (9hl/ha); average 5 passages at harvest; juice pressed 3 times; 3 yrs new oak ageing
- About 8,000cs/yr; also produces a dry white Ygrec.
- No wine produces if vintage is too poor e.g. 2012. Cryoextraction introduced to help in poor vintages
- Wines are golden, rich w hi acidity and botrytis aromas. Hi longevity and premium prices.

○ **Chateau Ausone – St Émilion**

- Small Grand Cru classé A estate named after poet Ausonius who had his villa there in 300AD.
- 7ha with 50% Cabernet Franc & 50% Merlot located on the steep slopes of the Cotes
- Produces 2,000cs/year; 2nd wine Chapelle d'Ausone; Michel Rolland appointed consultant in 95

○ **Chateau Pétrus - Pomerol**

- To unclassified estate in the eastern portion of Pomerol; owned by J P Moueix, wine merchant
- 11ha vineyards w 95% Merlot and 5% Cabernet Franc on heavy clay soil w iron subsoil (unique); avg of vines 45yrs and wines aged in 100% new oak
- Not classified but highly recognised and commands premium prices

○ **Chateau Bonnet – Bordeaux AC**

- 1.5m btls/yr; owned by André Lurton who also owns crus in almost all parts of Bordelais
- Ch Bonnet is 270ha dedicated to reds, whites & rosés w the Réserve reds aged in barrels and great value

SWOT	<p>S: heritage and expertise / Bdx brand / Bdx university (Peynaud, Rolland) / important international influence</p> <p>W: lack of strong international brand / fragmented ownership / complex and static classifications</p> <p>O: new EU regulations re table wine / MT concentration of ownership / rise of new brands</p> <p>T: competition at top and bottom end of market / marginal climate / overproduction</p>
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FRANCE - SOUTHWEST

HISTORY	<ul style="list-style-type: none"> • Vines cultivated in Roman times but winemaking really started in the Middle Ages under the influence of monks and monasteries • Trade development was limited by Bordeaux, natural exit port and that taxed the wines not from Bordeaux. Further inland (e.g. Madiran), the commercial progress was limited by the lack of easy navigation to the sea and competition with other crops. • Bergerac: slow to recover from Phylloxera 		
CLIMATE & WEATHER	<ul style="list-style-type: none"> • Maritime but generally less heavily influenced by the Atlantic. 		
GRAPE VARIETIES	<ul style="list-style-type: none"> • Bordeaux varieties i.e. Merlot, Cab Sauvignon, Cab Franc, Sauvignon blanc, Sémillon and Muscadelle dominate in Bergerac (+Monbazillac), Buzet & to a lesser extent Gaillac (white varieties) and Fronton (red varieties) • Local grape varieties include: <table border="0" style="width: 100%;"> <tr> <td style="vertical-align: top; width: 50%;"> <p><u>Reds (% of plantings)</u></p> <ul style="list-style-type: none"> ➤ Auxerrois / Malbec – Cahors / Bergerac / Buzet / Fronton <ul style="list-style-type: none"> - Believed to originate from Burgundy (Cot) - Thin-skinned grape which needs more sun vs. Cab Sauv or Merlot - Often cultivated in bush vines (gobelet) - Produces darkest and most tannic wines in limestone soils of Cahors - Ripe fruit gives deep colour, ample tannins and aromas of damsons, tobacco and raisin ➤ Tannat – Madiran / Cahors <ul style="list-style-type: none"> - Tough, deep black-berried grape - Often blended w Cab Sauvignon, Cab Franc and Fer to soften astringency - Deep colour, very high potentially astringent tannins, hi alcohol, raspberry aromas and ageing potential - Micro-oxygenation created to help soften tannins ➤ Duras – Gaillac <ul style="list-style-type: none"> - Early budding vine - Usually blended w Fer and Négrette - Deep colour, full bodied wines with good structure and acidity ➤ Braucol / Fer – Gaillac / Madiran <ul style="list-style-type: none"> - Main component in Gaillac; minor in Madiran & Bergerac; nothing to do w the Argentinian Fer - Aromas of currants and red fruits w soft tannins ➤ Négrette - Fronton <ul style="list-style-type: none"> - Grown primarily between Toulouse and Albi - Suited for hot, dry climate of Toulouse - Fruit flavours w slight animal or violet flavour - Must dominate the blend in Fronton AC </td> <td style="vertical-align: top; width: 50%;"> <p><u>Whites (% of plantings)</u></p> <ul style="list-style-type: none"> ➤ Mauzac - Gaillac <ul style="list-style-type: none"> - Principal grape variety in Gaillac - Relatively aromatic (apple flavours) - Usually blended w Len de l'EI - Slight revival since the late 80s ➤ Len de l'EI - Gaillac <ul style="list-style-type: none"> - Compulsory minor ingredient in Gaillac whites - Powerful and characterful but can be flabby ➤ Ondenc - Gaillac <ul style="list-style-type: none"> - Poor yields and prone to rot ➤ Petit Manseng – Jurancon / VdP <ul style="list-style-type: none"> - Top quality small thick-skinned white grape - Very low yields but ideal for sweet wines - Less than 1/3 of G. 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VITICULTURE & WINEMAKING	<ul style="list-style-type: none"> • 20,000ha of AC & 50,000ha of total vines split 50/50 between individual producers and the 23 cooperatives. • Micro-oxygenation created in Madiran to accelerate softening of tannins during maturation • Sweet Jurancon produced using passerillage (grapes dried on the vine), harvested are at least 2 passages and aged in oak. 		
KEY APPELLATIONS & CHARACTERISTICS	<ol style="list-style-type: none"> Bergerac AC (R/W/Sweet/R) – 8,000ha <ul style="list-style-type: none"> - Eastern continuation of right bank and Entre-deux-mers with vineyards on both sides of the Dordogne - Climate between maritime and continental - Soils from alluvial silt to clay and limestone on higher terraces - Makes mainly reds from Bordeaux varieties w increasing proportion of barrel-aged Cotes de Bergerac (lower yields & higher abv ~12.5%abv) and whites (Bergerac sec) - Sweet botrytised whites made in Monbazillac, Saussignac and Haut-Montravel –all ACs. ○ Monbazillac AC – 2,000ha <ul style="list-style-type: none"> - Sub-region located on the left bank of Dordogne close to confluence w Gardonnette river -> mist in autumn + development of noble rot - Botrytised whites made from Sémillon, Sauvignon blanc and Muscadelle - Max yields 40hl/ha; mechanical harvesting banned since 93; min 14.5% potential alcohol - Top estates include Chateau Tirecul La Graviere w intense, rich nectar or Chtx Belingard and La Brie. 2. Buzet AC (R/W) -1,400ha <ul style="list-style-type: none"> - Located in the Bordure Aquitaine up the left bank of the Garonne river; south east of the Graves district - Viticulture area since Roman times - AC created in 1973 under strong influence of cooperative Les Vignerons de Buzet who spearheaded the use of sophisticated barrel ageing (all Buzet must have min 1yr in barrel) - Mainly gravels and clay hills planted with the 3 main Bdx varieties, especially Merlot - Top domains include Ch de Gueyze, Baron d'Arduuil 		

3. **Cahors AC (R) – 4,000ha**
 - 100km north of Toulouse along the Lot river and mainly west of the town of Cahors
 - Climate influenced both by the Mediterranean and the Atlantic; great sun exposure; cold winters
 - Golden age in 18th w 40,000ha and wine used for blend in Bdx; phylloxera decimated the vineyards and the arrival of railways in the early 20th made the cheaper Languedoc more popular; revival since 1956
 - Auxerrois (i.e. Malbec) is the key grape (min 70% of AC's blend) w Merlot & Tannat for the remaining 30%
 - The wines are very tannic when young and benefit from ageing; berries, liquorice and herbs flavours
4. **Gaillac AC (W/R/Sweet/Sparkling) – 2,500ha (🚩) #1**
 - Dynamic region North-east of Toulouse on both sides of the Tarn river and around the town of Gaillac
 - Believed to be one of the first viticultural centres of ancient Gaul (since 1st century AD), long before Bdx
 - Gaillac exports were limited by Bordeaux's tariffs and conditions to ship in the middle ages
 - Warmer climate
 - Most commonly spicy structured reds from Duras and Braucol; crisp, dry whites from sauvignon, sémillon and local Appley Mauzac and powerful Len de l'El; sweet whites from Ondenc as well Mauzac & Len de l'El
5. **Madiran AC (R) – 1,400ha #4**
 - In Gascogne; south of Armagnac; north-east of Pau; mainly clay & limestone soils
 - Climate influenced by the Pacific that soften and moistens the vineyards but autumn are usually dry
 - Tannat is the key grape –min 40-80% of vineyard- supplemented by Bouchy (Cab Frc), Cab Sauv and Fer
 - Micro-oxygenation (i.e. precise oxygenation of wine early in fermentation and/or in maturation) developed here to soften the strong tannins of Tannat and make the wines more approachable earlier
 - Leading producers include Chateau Bouscassé and Chateau Montus. Most of the top wines 100% Tannat
 - The wines are full bodied, tannic w brambly flavours
6. **Jurancon AC (Sweet) / Jurancon Sec (W) – 820ha**
 - One of France's earliest AC; hilly relatively cool corner (300m hi) at the foot of the Pyrénées near Pau
 - Vines are espalier trained to avoid recurrent spring frosts on the steep limestone and clays slopes
 - Grape varieties: Gros Manseng (mostly for dry wines), Petit Manseng (mostly for sweet wines) and Courbu
 - Sweet Jurancon produced using passerillage (grapes dried on the vine), harvested are at least 2 passages (up to December time) and aged in oak.
 - The sweet wines develop aromas of tropical fruit (pineapple, mango)
7. **Fronton AC (R/W/R) – 1,800ha (🚩) #2**
 - Dynamic appellation; 35kmNorth of Toulouse
 - Négrette is the key grape –min 50-70% of AC wine w Fer, Syrah, Cab Frc and Cab Sauv complementing
 - The red wines (85% of production) are dark and tannic w aromas of violet and licorice.
 - The rosés (15%) from Négrette has low acidity and to be drunk young
 - A little amount of white wine made from Mauzac
 - The cooperative is an important producer; fine wines made by Chateau Plaisance and Le Roc
8. **Vin de Pays du Comté Tolosan**
 - Regional VdP that covers the whole of the Southwest region; 2nd largest Southwest IGP w 225,000hl/yr
 - Crisp, fresh, easy drinking whites from Colombard, Gros Manseng, Ugni blanc, Sauv Blanc and Chardonnay
9. **Vin de Pays du Gers & Vin de Pays des Cotes de Gascogne**
 - Departmental VdPs; Cotes de Gascogne 700,000hl/yr is the largest (Gers far behind) and most exported
 - Crisp, fresh, easy drinking whites from Colombard, Gros Manseng, Ugni blanc, Sauv Blanc and Chardonnay

PRODUCTION	<ul style="list-style-type: none"> • 3.4 million hl i.e. ~450m btls with: <ul style="list-style-type: none"> - 55% whites 45% reds + rosés - 45% IGP, 30% ACs and 25% (table) wine - Only 10-20% exported
TRADE	<ul style="list-style-type: none"> • Plaimont is a major cooperative in France and the South West <ul style="list-style-type: none"> - Groupment of 3 cooperatives initiated by André Dubosc in late 70s - Linked to 1,000growers and 5,300ha - 40m btls sold in 2011 w 55% of volume exported - Selling IGP (e.g. Cotes de Gascogne, Comté Tolosan) as well as AC (e.g. Madiran 48% of production, St Mont -98% of production) - UK: Le Citronnier in Laithwaites