

SPAIN

SPECIFICATIONS (What you have to know)	DISTRICTS, COMMUNES AND VINEYARDS General: DOs de Pago North West: Rías Baixas, Bierzo Duero Valley: Toro, Rueda, Ribera del Duero, VdlT Castilla y León Ebro and Pyrénées: Rioja (Alta, Alavesa, Oriental), Navarra, Calatayud, Cariñena, Somontano Catalunya: Catalunya, Penedès, Costers del Segre, Priorat, Tarragona Castilla-La Mancha: La Mancha, Valdepeñas, VdlT de Castilla Levante: Valencia, Jumilla, Yecla KEY LIGHT WINES Red Rioja Crianza Rioja Reserva Rioja Gran Reserva Ribera del Duero Priorat Modern style from Catalonia, Costers del Segre, Navarra, or Somontano Yecla or Jumilla White Rias Baixas Rueda Rioja (traditional or modern style) Rosé Any Spanish rosé KEY FACTORS Grape varieties: Tempranillo, Garnacha, Cariñena, Graciano, Monastrell, Mencia, Bobal, Verdejo, Albariño, Viura (Macabeo), Malvasia, Godello, Airen, Parrellada, Palomino Fino Weather: Drought, rainfall, evaporation, temperature variability Geography: Altitude Viticulture: Drip irrigation Vinification: Doble pasta, Generoso, Tinaja, Oak, Barrica Classification: Vino, Vino de Mesa, Vino de la Tierra, DO, DOCa, Joven, Crianza, Reserva, Gran Reserva, Pago, Vino de Pago Producers: Bodega, finca, Torres Miguel, Codorniu, Freixenet, Gonzalez Byass, Vega Sicilia Others: Bulk wine
VIDEO PLAYLIST	https://www.youtube.com/watch?v=Ey7FUIWHEGg&list=PLCx_IQt-zSFPuaV9m4jABdtqhdO062H0d
HISTORY	- 3000-4000BC: grapes already cultivated - 700BC: first traces of systematic cultivation of vineyards by Greek colonies - 200BC: Industrialisation of wine production under Roman rule. Exports far exceed Italy or France. - 16th: birth of the Sherry industry that was progressively exported all over the world. - 1850s: Luciano de Murrieta produced the first 'modern Rioja' using French vat-fermenting methods - 1870s: Joseph Raventós founded Codorniu. France turned to Spain post-Phylloxera for wine supplies - Late 1890s-Early 20th: Phylloxera hits Spain > native varieties not replanted in favour of higher yielding ones - 1920-30s: start of DO and first DOs created with Rioja DO #1 in 1926 - 1939-78: Wine industry affected by Civil War, WW2 and under Franco's rule - 1978-now: modernisation of viticulture (planting, training & pruning) & winemaking (stainless steel, temperature control) techniques enhanced by European investment (following Spain EU entry in 78) & companies (Miguel Torres) - 2003: Irrigation allowed following 1992-3 major droughts
SOILS & TOPOGRAPHY	- Site selection important > search for altitude. 650m avg (one of the highest in the world) - Soils: diverse
VITICULTURE	Low density > low yields (often 20 hl/ha) Bush training except new vineyards Main threats: drought
VINIFICATION	Lots of investments since the 80's > introduction of modern techniques REDS Fermentation on skins Controlled pumping over (tannins & colour extraction) Semi-carbonic fermentation for light easy-drinking reds WHITES Harvest date important for balance between sugar & acidity Limited handling to prevent oxidation Temperature control in the cellar Cool maceration to extract aromatics of delicate varieties Barrel fermentation (not always) ROSADOS Skin contact 12-24 hours > intense colour (but out of fashion...) Temperature control

GRAPE VARIETIES	400 different grape varieties planted but 20 grapes represent 80% of the production. <u>Reds</u> 1. Tempranillo=Cencibel=Tinto Fino=Ull de Lebre – 17% Native black grape Mostly in the North for premium wines Thick skin Early ripening (temprano means ‘early’) Prefers chalky soils & moderate climates Little resistance to pests and diseases Wines with high acidity and flavours of strawberry with good ageing potential. Oak and ageing add flavours of herbs, mushrooms, leather & tobacco 2. Garnacha=Grenache Mostly likely to originate from Northern Spain Vigorous vines > High yields Strong wood canopy & resistance to wind Suited to hot dry soils Buds early > needs long growing season to ripen Thin skins with light pigments > pale colour Wines high in alcohol, low in tannins with relatively light flavours of raspberries, strawberries Older vines/lower yields produce darker, more tannic wines (e.g. in Priorat) with darker fruit & more complex aromas Often blended to add fruit or used for Rosados Often bush trained> mechanization difficult 3. Carinena=Mazuelo=Carignan Originates from Aragon High yielding Late budding & ripening (> warm climate) Thick stalks > mechanical harvesting difficult Deep colour, hi acidity, hi tannins w red fruits flavours Often blended with Tempranillo 4. Monastrell=Mourvèdre Grown in South-east of Spain Buds & ripens late (> warm climate) Dark, full bodied spicy wines, hi tannins, meaty Great ageing potential 5. Graciano Low yielding Buds very late Prone to downy mildew Deep-coloured, full bodied tannic wines Limited plantings, mainly in Rioja to be blended for premium wines Great ageing potential Others: Bobal, Syrah, Merlot, Cabernet Sauvignon <u>Whites</u> 1. Airen – 25% Resistance to drought Neutral Wines prone to oxidation Mainly in La Mancha for spirits or basic whites 2. Albariño Native grape from Galicia Mainly grown on the Atlantic coast Thick-skinned=OK damp climates Almost extinct post-phylloxera Produces crisp aromatic whites 3. Verdejo Mainly in Rueda Similar style to Sv blanc Oxidises easily> often harvested at night 4. Malvasia Full bodied whites Prone to oxydation Used in traditional oak-aged Rioja with Viura for richness 5. Viura=Macabeo Originally from France Interesting when low yields Mostly planted in Rioja & Catalunya Forms the basis for Cava Others: Chardonnay															
WINE APPELLATIONS	1. Vino de Espana (replaces vino de Mesa) 2. Vino de la Tierra (VdIT) - Similar to IGP x40 3. Vinos de Calidad con Indicación Geographica (VCIG) Similar to old French old VDQS 4. Denominación de Origen (DO) x60 VCIG + 5 years wait and review Equivalent to AOP i.e. must satisfy a minimum quality & grape varieties, viticultural method, location and style are specified and regulated by the Consejo Regulador (one per DO). 5. Denominación de Origen – Pago (DO Pago) x 14 New. Outstanding single estate from DO and which produce from own grapes. E.g: Pago Aylés (Aragon), Casa Del Blanco (Castille- La Mancha), Los Balagueses (Valencia) 6. Denominación de Origen Calificada (DOC, DOCa, DOQ) x 2 DO + 10 years wait and review Rioja (91), Priorat (03) only - Ageing requirements with regional differences: <table><tr><th></th><th>Red</th><th>White & Rosado</th></tr><tr><td>Joven</td><td colspan="2">Bottled <1 yr after harvest</td></tr><tr><td>Crianza</td><td>Min 2 yrs ageing / min 6 mths in oak</td><td>Min 1 yr ageing / min 6 mths in oak</td></tr><tr><td>Reserva</td><td>Min 3 yrs ageing / min 1yr in oak</td><td>Min 2 yrs ageing / min 6 mths in oak</td></tr><tr><td>Gran Reserva</td><td>5 yrs ageing / min 2yrs in oak</td><td>4 yrs ageing / min 6 mths in oak Rare</td></tr></table>		Red	White & Rosado	Joven	Bottled <1 yr after harvest		Crianza	Min 2 yrs ageing / min 6 mths in oak	Min 1 yr ageing / min 6 mths in oak	Reserva	Min 3 yrs ageing / min 1yr in oak	Min 2 yrs ageing / min 6 mths in oak	Gran Reserva	5 yrs ageing / min 2yrs in oak	4 yrs ageing / min 6 mths in oak Rare
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	Only in exceptional vintages.		
	Reserva and Gran Reserva often aged much longer than min required. - Other labelling terms - o Noble – Min 1 yr ageing / no oak ageing required - o Anejo – Min 2 yr ageing / no oak ageing required - o Viejo – Min 3 yr ageing / no oak ageing required. Wine may display marked oxidative notes		
PRODUCTION & BUSINESS	In a nutshell: Land of American oak, increasing ambition, sherry, and low-yielding bush vines. 40 million hl = #3 in the world 46% Table wines / 34% DO wines 10,000 wineries / Large bodegas / fincas (often 100++ ha) Most important regions: - Castilla-La Mancha – 47% - Catalunya – 10% - Extremadura – 8% - Rioja – 7% - Valencia – 7% Domestic consumption: 30lts/yr/person (#9th) Exports: £1.5m exported with UK & Germany the main export markets with a combined 34% Cava is the main DO to be exported (20%) before Rioja (18%) and La Mancha (10%)		

GALICIA (NORTH-WEST)

RIAS BAIXAS GALICIA (NORTH-WEST SPAIN) (●●)

HISTORY	1970s: revival of the area (formerly planted with high yielding hybrids & Palomino for poor quality wine) further helped by EU funds after Spain joined the EU in 86. Main DO in Galicia.
SOILS & TOPOGRAPHY	Northern Atlantic coast in the north-west of Spain and directly north of Portugal. 5 sub-zones, each w their terroir & climate. El Salnés, around Cambados w low rolling hills w rocky & alluvial soils.
CLIMATE & WEATHER	Atlantic climate w mild temperatures and high rainfall (up to 1,300mm in El Salnés) Wet winters & sea fog. High vintage variation impacts quantity and prices
GRAPE VARIETIES	Whites (90% of production): Albariño (90% of plantings) + few others Reds: Caino Tinto + few others
VITICULTURE	2,700ha DO since 1988 Vines trained along granite posts (parrales) and wires > protect them from humidity and maximise sun exposure Key hazards: Dampness (> disease control key); coastal winds, frosts, hailstones and summer heat
WINE STYLES	All Galician wines to be drunk young. Experimentation with barrel fermentation for Albariño but mostly aromatic with high refreshing acidity. COURSE TASTING NOTES: Spanish Albariño - Pale lemon colour, medium intense nose of spring flowers, green apple, honeydew melon , fennel and lemon zest . High acidity , medium alcohol with a medium + finish.
LAW	White Rias Baixas DO min 70% Albariño, varietal "Rias Baixas Albariño" must be 100% Albarino
KEY PRODUCERS	Bodegas Martín Códax 1.5m btls/yr

BIERZO GALICIA (NORTH-WEST SPAIN) (●●)

SOILS & TOPOGRAPHY	- Bordering with Galicia towards the west. - Vineyards on gentle slopes at low altitude, protected from the Atlantic influence by mountains. - Mostly rich & fertile soils. Some quartz & slate soils in the mountains.
CLIMATE & WEATHER	More balanced climate vs. rest of Castilla y Leon: cooler, less extreme continental climate
GRAPE VARIETIES	Reds: Mencía Whites: Godello
WINE STYLES	DO since 1989. All reds must contain min 75% Mencía. Closer in style to Galicia.
KEY PRODUCERS	Descendientes de J. Palacios - Old 15ha-vineyard - In the slopes owned Alvaro Palacios & his new nephew Ricardo - Biodynamic - Top wine: Pétalos del Bierzo

DUERO VALLEY (NORTH-CENTRAL SPAIN)

TORO DUERO VALLEY (NORTH-CENTRAL SPAIN) (●●●)

HISTORY	1st BC: first wines made in the area. Middle ages: Toro renowned for its wine all over Spain thanks to King Alfonso IX 19th: Phylloxera did not affect the region as badly thanks to sandy soils (esp. in the north).
SOILS & TOPOGRAPHY	Located in the province of Zamora, upstream from Portugal

	Most vineyards between 620-750m hi. Mainly alluvial soils but some sandy soils w limestone subsoil in the north
CLIMATE & WEATHER	Extreme continental climate with wide temperature range (-11C to 3C) w low rainfall 350mm & 2,600h of sunlight
GRAPE VARIETIES	Reds: Tinto de Toro, Garnacha Whites: Malvasia, Verdejo
VITICULTURE	6,000ha – DO since 1987
WINE STYLES	Reds: predominantly Tinta de Toro with some Ganacha Tinta. Full bodied, hi alcohol (up to 15% abv), soft tannins. Whites: Verdejo & Malvasia to blend into reds
KEY PRODUCERS	- Bodegas Vega Sauco's wines enjoy long American oak-ageing for intense colour & taste. - A lot of top producers from Ribera del Duero are investing in the area.
RUEDA DUERO (NORTH-CENTRAL SPAIN) (●●●)	
HISTORY	- 11th century: first evidence of winemaking in Rueda. Verdejo cultivated since 18th - 1890s: Phylloxera destroyed 2/3 of the vineyards - 1972: arrival of Marques de Riscal from La Rioja that sparked a revolution - DO created in 1980
SOILS & TOPOGRAPHY	- Around Rueda, 170km northwest of Madrid - Flat plains 600-780m hi w Duero river flowing westwards. - Iron-rich soils w good drainage. Chalky soils beside the Douro in the north.
CLIMATE & WEATHER	- Continental w cool evenings that give the wine elegance - Avg rainfall 400mm. 2,700h of sunlight/yr. Strong winds
GRAPE VARIETIES	Reds: Tinta del País (Tempranillo clone; native to the area) Whites: Verdejo, Sauvignon Bc
VITICULTURE	- 7,600ha - Most new vineyards set up for mechanisation and vines trained low to protect vs. winds. - Key hazards: spring frost, hailstones in winter/spring
WINE STYLES	<u>WHITES</u> Night harvest Selection tables Cold maceration Temperature-controlled fermentation Verdejo = minimum 50% Verdejo. Aromatic wines w peach & melon flavours.
LAW	DO Rueda (min. 50% Verdejo) DO Rueda Verdejo (min. 85% Verdejo – in line with EU requirements for varietal wine) DO Rueda Sauvignon (again, a minimum of 85% Sauvignon Blanc) DO Rueda Espumoso (traditional method sparkling based on Verdejo) DO Rueda Dorado (liqueur wine, oxidative in style)
PRODUCTION	- Mostly white wines > winemakers battling in court to keep the DO 100% white. - Vinos blancos de Castilla: undisputed pioneer in modern-winemaking in Rueda. Developed a new white wine w the help of Émile Peynaud in the 70s. Now produces 1.5m btls incl Marqués de Riscal Rueda Superior.
RIBERA DEL DUERO DUERO (NORTH-CENTRAL SPAIN) (●)	
HISTORY	12th: arrival of Benedictine monks from Cluny and birth of modern viticulture dates in the region 1970-80s: Tradition of cheap rosés > Driving bodegas like Pesquera changed styles for wines as elegant as Rioja but fuller bodied, concentrated & fruit driven. International renown followed
SOILS & TOPOGRAPHY	Flat, high altitude land around Cigales (700-850m) ¾ of the vineyards are in the province of Burgos. Best soils have high limestone content and large stones to aid drainage .
CLIMATE & WEATHER	Continental climate tempered by altitude > high diurnal range. Relatively short growing season with hot summers (up to 40C) and harsh winters. Low rainfall (450mm) and 2,400h of annual sunlight.
VITICULTURE	21,000ha – DO since 1982 More than 8,000 vine growers. Key hazards: spring frost
WINE STYLES	Almost 100% Tempranillo (excl. Vega Sicilia) Most wines not aged as long as in Rioja for a deeper colour, high sweeter tannins and darker black fruit & plum flavours Use of new French oak . <i>COURSE TASTING NOTES: Tempranillo from Ribera del Duero - Deep ruby colour. Medium intense nose of plum, raspberry, dark chocolate, coconut, sweet vanilla, leather, cedar. Dry palate with medium acidity, high ripe tannins, high alcohol, great ageing potential.</i>
PRODUCTION	73m btls/yr (vs. 29m btls in 2001). 250 bodegas
KEY PRODUCERS	Vega Sicilia - 2.3m btls/yr

	- 200ha - Spanish 'first growth' vineyard estate founded in 1864 now part of the Ribera del Duero DO. - Current style defined in 1910s when winery was leased by a Rioja grower. Jump in quality after acquisition by Alvarez family in 82 - Vineyards on limestone soils w Tinto fino but also 20% of Cab Sauv, Merlot, Malbec and Albillo. - Range: Valbuena – 5yrs in American oak; Unico - best vintages only & up to 10yrs in tanks & barrels - Also invested in Toro > Pintia winery (first vintage in 2001) Pesquera - Founded by Alejandro Fernandez who is credited to have created the modern Ribera style when in 1972, angered by the cooperatives' attitude towards grapes buying (the more colour, the higher the price) decided to create his own bodega. - Robert Parker called his wines 'the Pétrus of Spain'. - 100% Tinto fino wines aged in American oak - 850,000btl/yr from 220ha estate Pingus - 5ha vineyard - Run by Bordeaux-trained Peter Sisseck - Vineyards in the best terroirs of Ribera - Wines matured in new oak only - Parker-acclaimed cult wine w only 7,000btl produced annually - Flor de pingus 2nd wine
CASTILLA Y LEON VdIT/IGP DUERO (NORTH-CENTRAL SPAIN)	
	Covers the whole Duero Valley. Declassified wines or wines outside the DO regulations.
EBRO AND THE PYRENEES (NORTH-CENTRAL SPAIN)	
RIOJA – EBRO & THE PYRENEES (NORTH-CENTRAL SPAIN) (●●●)	
HISTORY	2nd BC: grapes grown on bush vines and pressed by foot on stone troughs Until 19th: most of the wines are light & fruity made with carbonic maceration 1852: nobleman Luciano de Murrieta borrows quality oak casks from Bordeaux > 1st 'modern Rioja' 1860-70s: Bordeaux winemakers flee Phylloxera and relocate in Rioja. 1901: Rioja hit by Phylloxera; by which time Bordeaux was back to full production 1926: Consejo Regulador created to delimit the zones of production > DO 1960-70s: recovery encouraged by growing foreign markets and motorway between Logrono & Bilbao 1991: Rioja promoted to DOCa 2018: New regulations modernizing the appellation for quality, focusing on locations rather than ageing time. Possibility to add "municipio" name (=village) to front label. Winemakers may now offer single-varietal white wines under the Rioja Blanco label.
SOILS & TOPOGRAPHY	Name from Rio Oja South of the Cantabrian mountains > protect the area vs. rain & winds from the Atlantic Along the Ebro river Most vineyards on a plateau from 300m to 800m altitude. Soils are mostly iron-rich or chalk-rich clay. More fertile alluvial soils in the east

CLIMATE & WEATHER	Continental climate Low rainfall: 300mm (Rioja Baja)-500mm (Alta & Alavesa)																				
SUBREGIONS	<u>1. Rioja Alavesa- 16,000ha</u> West of Logrono on & north of Ebro river Cool maritime influence from the Atlantic with relatively higher rainfall Chalk-rich soils on south facing slopes > lighter bodied wines with finesse 94% plantings = Tempranillo. <u>2. Rioja Alta – 29,000ha</u> West of Logrono, south of the Ebro river Maritime influence but warmer & drier climate vs. Alavesa Higher elevation (-> shorter growing season) w clay/red iron rich soils Viura best on Clay; Tempranillo on iron & Malvasia on alluvial soils Later harvest <u>3. Rioja Oriental (previously Baja) – 25,000ha</u> East of Logrono, south of Ebro river Continental to Mediterranean climate > Drought (temp. up to 35C) Heavy clay favours Garnacha Baja wines tend to be deeply coloured, hi in alcohol but low in acidity and flavour intensity																				
VITICULTURE	Small vineyards esp. in Alavesa & Alta. Traditionally, bush vines trained but new vineyards on wires																				
GRAPE VARIETIES	Reds & Rosés (90% of plantings), Whites (10%) <u>REDS</u> Tempranillo = Ull de Lebre. Usually 60-70% of the Rioja blend Garnacha usually 20% in the Rioja blend to add body & alcohol. Most important in Rioja Baja Carignan & Graciano usually part of the last 10% of Rioja blend <i>Others (since 2007): Maturana Tinta, Maturano, Monastrell</i> <u>WHITES</u> Malvasia (Viura), Garnacha Blanca <i>Others (since 2007): Verdejo, Sv Bc, Chardonnay, Maturana Blanca, Tempranillo Blanco, Turruntés</i>																				
VINIFICATION	<u>REDS</u> Importance of barrel maturation and blending (225l barrico) Traditional style: new American oak > soft vanilla flavour in youth, savoury, meaty characters for Reserva and Gran Reserva. Modern style: Darker with more pronounced fruit character of strawberries & plum and more obvious oak flavours of vanilla toast and coconut. COURSE TASTING NOTES: Rioja Crianza: Medium ruby colour, medium – intense nose of red plum, blackberry, grenadine, juniper, black pepper, vanilla, herbal. Dry palate, medium acidity, medium ripe tannins, high alcohol, medium bodied. Rioja Reserva: Medium ruby colour, medium + intense nose of smoke, coffee, cloves, dry figs, sweet vanilla, cocoa, blackberry. Dry palate, medium acidity, medium + ripe tannins, medium + alcohol, medium + bodied, long finish. Great ageing potential. Rioja Gran Reserva: Medium ruby colour with a garnet rim. Medium intense nose of blackberry, dark chocolate, nutmeg, mint, eucalyptus, ground coffee, vanilla, cedar, mushroom. Dry palate with medium acidity, medium + ripe tannins, medium + alcohol, medium + finish. <u>WHITES</u> Traditional: deliberately oxidised and aged in American oak to create savoury, nutty character (e.g. Lopez de Heredia) Modern: low temperature fermentation in stainless steel. Some experimentation with French oak & barrel fermentation Mostly Viura + Malvasia. Verdejo, Chardonnay and Sauvignon blanc not more than 49% of the blend. COURSE TASTING NOTES: White Rioja with 5 years bottle ageing - Medium lemon green colour with pronounced notes of lemon, pineapple tart, mango, vanilla, resinous, wax (> charred wood). Dry palate, medium + acidity, medium – alcohol, medium + bodied, medium + finish. <u>ROSE</u> Mainly Garnacha and unaged Skin contact > strong colour																				
LAW	Barrel ageing: <table><tr><th></th><th>Total ageing</th><th>Min ageing in oak</th><th>Min ageing in btl</th><th>White & Rosé</th></tr><tr><td>Generic</td><td>0</td><td>0</td><td>0</td><td>0</td></tr><tr><td>Crianza</td><td>2 yrs</td><td>1 yr</td><td></td><td>6 months</td></tr><tr><td>Reserva</td><td>3 yrs</td><td>1 yr</td><td>6 months</td><td>6 months</td></tr></table>		Total ageing	Min ageing in oak	Min ageing in btl	White & Rosé	Generic	0	0	0	0	Crianza	2 yrs	1 yr		6 months	Reserva	3 yrs	1 yr	6 months	6 months
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	Gran Reserva 5 yrs 2 yrs 2yrs 6 months
	Location: Since 2008 “municipios” (equivalent to village names in France) can be added to the labels, or “viñedo singular” (equivalent to a “lieu-dit”) > Vino de zona, vino de municipio, viñedo singular Rosés: Since 2018 lighter colour permitted
PRODUCTION & BUSINESS	250m litres/yr 75% red, 15% rosé & 10% white 500 Bodegas buy grapes either directly from the 20,000 growers or via the 30 coops that control 45% of the grapes Rioja Consejo Regulador: Based in Logrono. Vine-growers + wine producers + merchants set the rules. Won a case to get bottling made mandatory within the region in 2000. Supports modernisation of Rioja wine marketing.
KEY PRODUCERS	Marques de Riscal – Rioja Alavesa - Founded by Camillo Hurtado; now run by Francisco Hurtado - Production 4m btls/yr - First to set up a grape-sorting table in 95 - Owns one of the oldest plantation of Cabernet Sauvignon in Rioja - Signature wine: super Reserva Baron de Chirél made with Cabernet. Marques de Caceres – Rioja Alta - Founded in 1970; changed the face of Rioja - Does not own any vineyard - Production 8.4m btls/yr - Worked with Emile Peynaud and now Michel Rolland to create very modern Riojas of all colours Marques de Murrieta – Rioja Alta - Founded by Luciano de Murrieta in 1852; now owned by the Cebrián family - Production 1.5m btls/yr - Signature wines: Ygay for reds & Capellanía (single vineyard white - old Malvasia vines in traditional oak style)
NAVARRA EBRO & THE PYRENEES (NORTH-CENTRAL SPAIN) (●●●)	
HISTORY	2nd BC: grape growing and wine production under Roman rule 1890s: Phylloxera destroyed 98% of the Navarra vineyards > replanting predominantly w Garnacha Since 1980s: move from bulk wine & rosé to quality & reds w private wineries & coops
SOILS & TOPOGRAPHY	Directly north of Rioja Baja w vineyards on the lower slopes of the Pyrenees, descending towards the basin of the Ebro river 5 subzones: Valdizarbe, Tierra Estella, Ribera Alta, Baja Montana & the most important Ribera Baja (30% of vineyards) Various soils. Brownish grey limestone and alluvium soils in Ribera Baja.
CLIMATE & WEATHER	Continental climate with Atlantic influences in the northern zones > moderate heat and slow ripening Average rainfall: 400-600mm.
GRAPE VARIETIES	Reds & Rosés (95% of plantings) / Whites (5% of plantings) REDS Tempranillo – 36% of plantings Garnacha – 32% of plantings Cabernet Sauvignon – 13% Merlot – 11% <i>Others: Graciano, Mazuelo</i> WHITES: Viura 4%, Chardonnay 1%, Garnacha Blanca, Moscatel COURSE TASTING NOTES: Rosé from Navarra - Medium pink colour, medium intense nose of strawberries, rose petals, confectionary, grenadine. Dry palate with medium acidity, low tannins (skin contact), medium alcohol, medium + finish.
VITICULTURE	13,300ha Most vines trellised (≠en vaso) to maximise exposure to sunlight and facilitate mechanisation High planting density Key hazards: frost at higher altitude and occasional storms EVENA (Estacion de Viticultura y Enologica de Navarra): Research foundation. Promoted vine training and mechanical harvesting.
PRODUCTION & BUSINESS	47m litres/yr w 1/3 exported Mainly known for vinous rosados & high quality reds. White production is limited
KEY PRODUCERS	Bodegas Julián Chivite - Oldest winery in Navarra: founded in 1647 by Julián Chivite; first DO Pago in 2007 - 75% of all Navarra exports until mid-80s; completely refurbished in 90 - 3m btls/yr - Gran Feudo = basic range up to the Colección 125 Tempranillo-Cabernet Ochoa - Small but dynamic bodega founded in 1847 still run by the Ochoa family

	- 800 000 btls/yr - Produced the first age-worthy Reserva & Gran Reserva and Navarra's first Muscat (in Italian style) - Javier Ochoa directed the EVENA for a few years. - Signature wines: Ochoa Tempranillo; Moscatel Dulce
CALATAYUD EBRO & THE PYRENEES (NORTH-CENTRAL SPAIN) (●●●)	
SOILS & TOPOGRAPHY	Directly south-west of Carinena in the region of Aragon. South-facing slopes on both banks of the Jalón river, a tributary from Ebro. 550-1000m altitude Soils are rocky & friable, brown limestone & loam over slate and gypsum
CLIMATE & WEATHER	Continental w hot dry summers and cold winters Avg rainfall: 300-500mm = Arid environment
GRAPE VARIETIES	REDS (90% of plantings): Old vine Garnacha (54% of plantings), Tempranillo, Syrah WHITES (10% of plantings): Mostly viura
VITICULTURE	5,600ha DO since 1990 Very low yields (20hl/ha).
WINE STYLES	90% of production red wine from Garnacha + Tempranillo = rich, powerful reds Recent investment in stainless steel and refrigeration = international crisp whites made from Viura and Rosados from Garnacha (saignée method) Use of new barrel ageing Calatayud Superior : Garnacha-based wine (minimum 85%) from old vines (min 50 years old). Yields restricted to roughly 20-25 hl/ha
KEY PRODUCERS	Castillo de Malenda and Bodegas San Alejandro coops have taken the lead w well-priced international style wines
CARINEÑA EBRO & THE PYRENEES (NORTH-CENTRAL SPAIN) (●●●)	
SOILS & TOPOGRAPHY	Most vineyards on a rocky plateau surrounded by hills that protect them from the cool winds of the Pyrenees Red/brown limestone w rocky sub soil. Hi levels of calcium carbonate and slate in places.
CLIMATE & WEATHER	Continental with long, hot summers w up to 38C in summer and -8C in winter
GRAPE VARIETIES	REDS : Garnacha (55% of plantings), Tempranillo (~10%), Carinena (~10%) WHITES : Macabeo (20% of total plantings)
VITICULTURE	17,000ha Trellis systems One of the oldest DO in Europe (1932).
WINE STYLES	Traditional= high in alcohol > replaced with wines from improved yield & winemaking techniques Quality inexpensive Reservas and Gran Reservas. Whites represent 20% of the whole production. Some Rosé too.
SOMONTANO EBRO & THE PYRENEES (NORTH-CENTRAL SPAIN) (●●●)	
SOILS & TOPOGRAPHY	Somontano: 'beneath the mountain'. Foothills of the Pyrenees. "Spain's New World" Altitude 350-650m high Dark sandy-clay soil high in lime content and rich in alluvial matter
CLIMATE & WEATHER	Cool climate w hi diurnal range (>whites) Significant rainfall (500mm)
GRAPE VARIETIES	(mostly international) REDS : Cabernet Sauvignon, Merlot, Tempranillo, Pinot Noir WHITES : Chardonnay, Chenin blanc, Gewurztraminer
VITICULTURE	4 000ha Key hazards: Hail, winter freezes
WINE STYLES	- Traditional juvenes in all 3 colours made from Macabeo, Moristel (local native grape) and Garnacha less and less common. - Modern wines are either French blend reds or fruit-driven varietal whites.
PRODUCTION & BUSINESS	Generally, modern fruit-driven varietal wines with white more than red. Just under 20m bottles produced
KEY PRODUCERS	93% of the production made by 3 wineries: 1. Vinas del Vero: supermodern winery; owns 1,100ha for 10mbtls 2. Enate: international styles of wine; 4.5m btls/yr Enate Reserva Especial 3. Bodegas Pirineos: cooperative formerly 100% of the DO; now 3rd w 3.3m btls/yr; local varieties
CATALUNYA (NORTH-EAST SPAIN)	
Heartland of Cava production: Paredada, Xarel-lo, Macabeo	
PENEDES CATALUNYA (NORTH-EAST SPAIN) (●●+sparklings)	
HISTORY	6th BC: introduction of Chardonnay vines by the Phoenicians 19th: one of the 1st regions in Spain to start mass production Birth of the Cava industry before Phylloxera in 87 1960s-70s: Miguel Torres revolution > temperature control, stainless steel, international varieties 1980s: other producers followed > Penedes became one of the most dynamic regions in Spain Late 90s: Penedes overshadowed by Priorat's reds. Now: still most important DO in Cataluña

SOILS & TOPOGRAPHY	North-east of Spain, south west of Barcelona Mostly well-drained, deep poor quality soils of Miocene sediments
CLIMATE & WEATHER	Mostly Mediterranean climate but a wide variety of micro-climates due to the proximity to the coast and the varied terrain rising up to 800m high Coastal areas very hot & dry / some areas inland 900mm rainfall and prone to frost
SUBREGIONS	<u>1. Penedès Maritim</u> Low-lying coastal area, From the sea up to 250m high Hot Mediterranean climate; the warmest of the 3 zones; sandy soils Mostly planted with Garnacha, Carinena and Monastrell for sturdy reds <u>2. Penedès Central</u> 250-500m altitude w more temperate climate; chalk & clay soils Centre of Cava production w Xarel-lo, Parellada & Macabeo. Also Ull de Llebre and Cab Sv. <u>3. Penedès Superior</u> 500-850m with a cool continental climate similar to Northern France (cold nights & frost danger) but long, sunny growing season. Predominance of Limestone. Chardonnay, Pinot Noir, Gewurztraminer, Riesling Lower yields and frost risk
GRAPE VARIETIES	REDS (33% of production): Tempranillo, Garnacha, Monastrell WHITES (66% of production): Xarel-lo, Parellada, Macabeo COURSE TASTING NOTES: Red Garnacha from Penedès - Medium ruby colour, medium + intense notes of plum, blueberry, stalk, vanilla (oak), thyme, liquorice, pepper. Dry palate with medium ripe tannins, high alcohol, full bodied.
VITICULTURE	27,000ha – DO since 91
KEY PRODUCERS	Bodegas Torres - 25m btl - Family company created in 1870 - Most extensive vineyards in Penedes (1,500ha) - Largest winery in Spain - Made famous by Miguel Torres Carbó in the 40-50s when he toured the world to promote his wines extensively and started estate bottling before his son introduced new viticulture (e.g. trellis systems) winemaking techniques incl. stainless steel and temperature control in the 60s - Owns estates and joint ventures in Curico, Sonoma and China Codorníu - #1 producer of bottle-fermented sparkling wine in world - 65% of turnover from Cava - Expanded in US and Duero. Freixenet (Penedès) - Largest exporter of Cava - Name comes from La Freixeneda, a plantation of ash trees originally owned by Pedro Ferrer's family - 150million bts/year - Focused on exports
COSTERS DEL SEGRE CATALUNYA (NORTH-EAST SPAIN) (●● +sparklings)	
SOILS & TOPOGRAPHY	Directly west of Conca de Barbera, more inland; protected by mountain ranges Most vineyards near the town of Lérida. 7 sub-zones: Artesa de Segre, Garrigues, Pallars, Raimat, Segrià et Valls del Río Curvo Mainly sandy topsoil over limestone
CLIMATE & WEATHER	Severe semi-arid climate w extreme diurnal range all year and low rainfall <400mm.
GRAPE VARIETIES	REDS (33% of production): Tempranillo, Garnacha WHITES (66% of production): Xarel-lo, Parellada, Macabeo
VITICULTURE	4,000ha – DO since 88 Irrigation automatically starts when temperature reaches 35°C and protects vs. frost in the winter.
KEY PRODUCERS	Codorníu / Raimat - 3,000ha - Manuel Raventós invested in the derelict castle of Raimat and renovated the vineyards between 1914 & 78. Obtained a DO for the area. - Produces sparkling, white, rosés and reds (oak-aged and not) in Californian style (winemakers trained there)
PRIORATO DOCa CATALUNYA (NORTH-EAST SPAIN) (●●)	
HISTORY	12th: Carthusian monks founded the priory of Scala Dei and introduced the art of viticulture to the area. Late 1970s: René Barbier saw the potential and set up Clos Mogador and was followed by friends. 1993: Alvaro Palacios bottled his L'Ermita from old vine Garnacha & successfully priced it higher vs. Vega Sicilia
SOILS & TOPOGRAPHY	Area south-west of Tarragona, isolated, sparsely populated & surrounded by precipitous mountains Most vineyards planted on the slopes on terraces at 100m-700m above sea level.

	Unique terroir from volcanic origin w licorella (i.e. red slate and mica), 50cm thick over a bedrock of schist which means the vine has to penetrate great depths to find water Best vineyards on steep slopes near Gratallop .
CLIMATE & WEATHER	Hot & dry continental climate but cooler in altitude Low rainfall w 400m/yr Hi seasonal variation (+35°C to -4°C)
GRAPE VARIETIES	Reds (96% of plantings): Garnacha (38%), Carinena (25% 🍷), Cabernet Sauvignon (14%), Syrah (11% 🍷), Merlot (6%) Whites (4%): Garnacha Blanca (2%), Macabeo (1%)
VITICULTURE	- 1,800ha - Very low yields due to the thick & poor soils & hot climate > grapes are very expensive. - Mechanisation impossible - Traditionally vines planted en vaso with newer vineyards en espaldera. - Key hazards: frost, hailstones
WINE STYLES	- Traditional Priorat: Low yielding Garnacha & Carinena aged for long periods in oak, developing rancio aromas of game & mushroom. They are deep colour, highly tannic and hi in alcohol - Modern wines from both local & international varieties = intense bramble fruit, powerful tannins & oak characters, long potential.
PRODUCTION	27,000 hl Only DOCa in Spain with Rioja.
KEY PRODUCERS	Clos Mogador (Gratallops) - Founded in late 1970s - 20ha for 25,000btl/yr - Clos Mogador Tinto reserve: top Spanish reds, made from Garnacha, Cab Sauv, Syrah & Carinena and aged for 16mths in oak Alvaro Palacios (Gratallops) - Became world famous with L'Ermita in 1993 - Made from 100-yr old Garnacha vines and a little Cab Sauv - One of the most sought after and most expensive wines in Spain - 25ha (& bought-in grapes) for 150,000btl/yr
TARRAGONA CATALUNYA (NORTH-EAST SPAIN) (🍷🍷🍷+sweet)	
HISTORY	Roman times: region renowned for its sweet red wines, exported to Rome. Before 1960s: red wines regarded as soft, robust & fiery 1960s: reputation of coarse & alcoholic wines
SOILS & TOPOGRAPHY	Alluvial soil in the plains, dark soils with limestone in the hills inland. Variety of altitude from 40-400m above sea level.
CLIMATE & WEATHER	Mediterranean near the coast / continental influences in the higher parts of the Ebro river valley
SUBZONES	1. Tarragona Campo (Baix Camp, Alt Camp, Tarragonès) - Close to the coast - Alluvial soils & Mediterranean climate > easy drinking fruity wines 2. Ribera d'Ebre
WINE STYLES	Mostly modern style reds & rosés, rich whites. Rancios: wines left in the sun in glass demijohns and then aged for min 4 years Tarragona Classico Licoroso: 100% Garnacha, fermented up to 17% abv and aged for 12 years.
GRAPE VARIETIES	Reds (30% of production): Garnacha, Carinena, Tempranillo Whites (70% of production): Garnacha Blanca, Macabeo, Pedro Ximenez
VITICULTURE	- 7300ha – DO since 1976 - Traditionally vines planted en vaso with newer vineyards en espaldera - Minimal frost risk
KEY PRODUCERS	Celler de Capcanes - One of the first cooperative to drive quality in Tarragona - 250ha for 750,000btl/yr - Top wine Cabrida made from an old Garnacha vineyard and joins the ranks of Catalunya's best
CASTILLA – LA MANCHA (CENTRAL SPAIN)	
LA MANCHA CASTILLA-LA MANCHA (CENTRAL SPAIN)	
HISTORY	1940s: wine production took off due to the arrival of numerous cooperatives in the region. 1986: key point of discussion in EU funding schemes
SOILS & TOPOGRAPHY	500-700m high plateau directly south of Madrid. Most of the vineyards located in Cidudad real, one of the 4 sub-zones of La Mancha. Dry, hard & shallow sandy clay soils.
CLIMATE & WEATHER	Hot, dry and extremely continental climate (45C to -15C) Rainfall 300-400mm 3,000h of sunlight/yr.
GRAPE VARIETIES	REDS (25% of plantings) Cencibel aka Tempranillo = 17% of all plantings WHITES (75% of plantings) Airen = 2/3 of all plantings
VITICULTURE	163,000ha – world's largest wine region DO since 1976

	17,000 vine growers Low density Bush trained vines. Low training so that leaves can shade the fruit from scorching sun. Recent move to pick earlier to keep acidity and fruit characters. Key hazards: drought (-> irrigation permitted since 1996).
WINE STYLES	Stainless steel and cool fermentation now prominent. Mainly neutral light wines. Standard ageing rules for Crianza, Reserva & Gran Reserva.
PRODUCTION	Represents 50% of Spain's harvest 15-20m hl produced annually with: - 60% exported (mainly Germany & France) - 2/3 reds and rosados produced (Airen used for distillation)
KEY PRODUCERS	Tomelloso – 1m btl. Quality producer with key wine Torre de Gazate from Cabernet sometimes blended w Cencibel
SUBZONES	1 st DO Pagos in 2001: Pago Dominio de Valdepusa & Pago Finca Élez Pago Casa del Blanco = One of the greatest DO Pagos (150 ha)

VALDEPENAS CASTILLA-LA MANCHA (CENTRAL SPAIN) (●●●)

SOILS & TOPOGRAPHY	Small enclave in the south of La Mancha plateau surrounded by hills Name means 'valley of rocks' Limestone based soils w good water retention during the hot summers. Some alluvial soils.
CLIMATE & WEATHER	Hot, dry and extremely continental climate (40C to -10C). Rainfall sparse and mainly spring & autumn
VITICULTURE	30,000ha – DO since 1932 Newer plantations on trellises to allow increase in production. Key hazards: hail storms, strong winds in spring
WINE STYLES	Modern winemaking w temperature controlled fermentation, stabilisation casks, modern filters, etc. Whites must be 100% Airen (2/3 of all plantings). Rosados usually blend of red grapes. Most wines to be drunk within a year. Joven & Crianza – min 20% Cencibel. Reservas & Gran Reservas 100% Cencibel. Joven usually made by carbonic maceration. Crianza, Reservas, Gran Reservas aged in old American oak Oak-aged reds have good structure, full bodied and ageworthy. Best wines are high quality & reasonably priced
KEY PRODUCERS	- Bodegas Real – 1.2m btl. Owned by Sergio Barroso; produces unoaked reds and Palacio de Ibor Crianza - Miguel Calatayud – 2.5m btl. Signature wines: Vegaval Plata Reserva made from Cencibel or Cabernet.

VdIT / IGP de Castilla CASTILLA-LA MANCHA (CENTRAL SPAIN)

HISTORY	Created in 1999
SOILS & TOPOGRAPHY	Plains
CLIMATE & WEATHER	Hot & arid
GRAPE VARIETIES	Tempranillo + international

THE LEVANT (SOUTH-EAST)

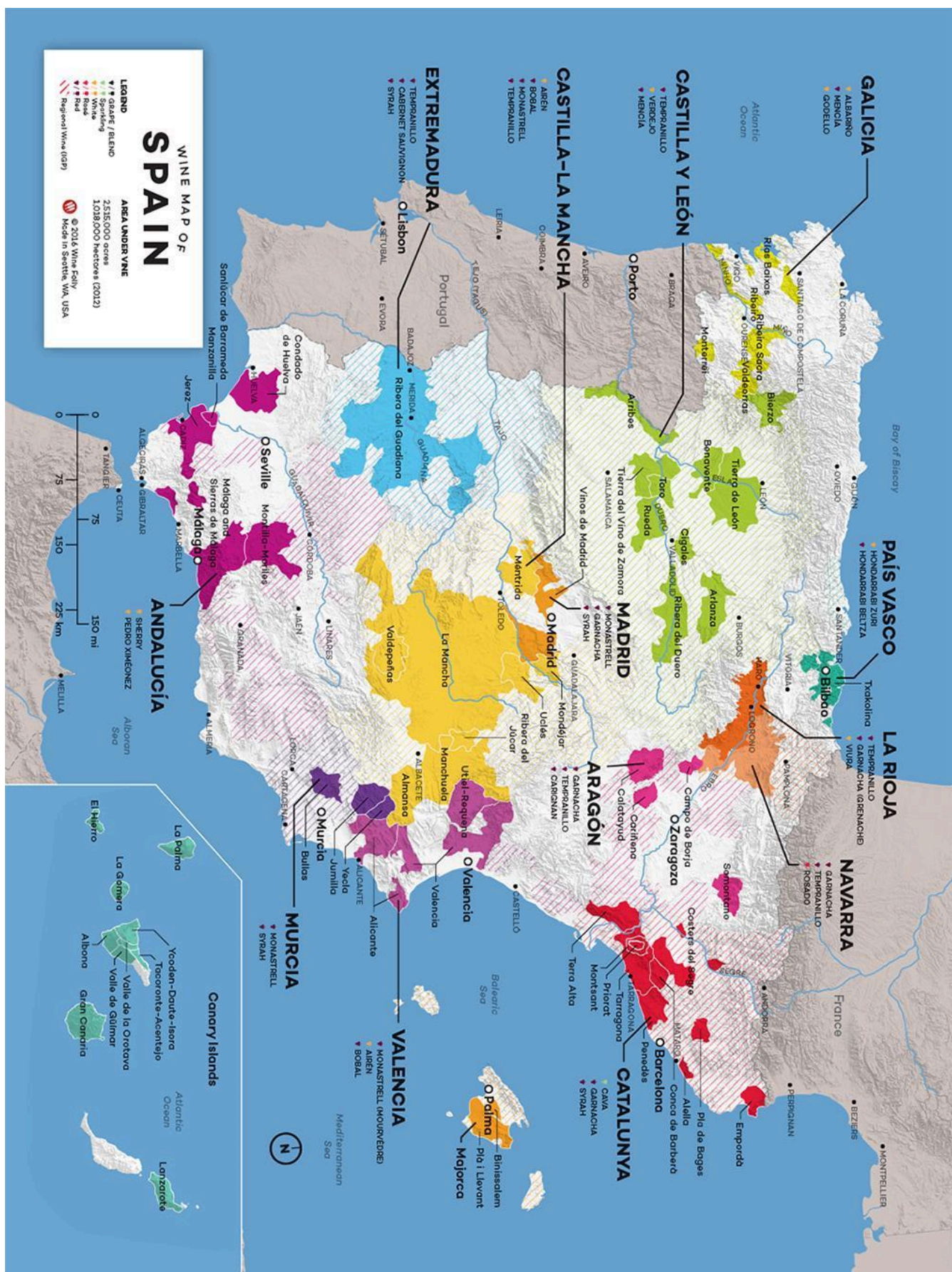
VALENCIA THE LEVANTE (SOUTH-EAST SPAIN) (●●)

SOILS & TOPOGRAPHY	South-east coast, low altitude on the coast, higher inland Clay soils on the coast; limestone inland Most of the vineyards inland
CLIMATE & WEATHER	Warm Mediterranean climate on the coast and mild continental inland.
GRAPE VARIETIES	REDS: Tempranillo, Bobal, Monastrell, Garnacha, Cab sv WHITES: Merseguera, Moscatel, Macabeo, Airen
VITICULTURE	17,000ha Low density plantings en vaso in hot areas (coast) and en espaldera in milder climates (inland) Key hazards: drought (> drip irrigation allowed)
WINE STYLES	Move towards quality but mainly value for money wines . Whites to be drunk young. Moscatel de Valencia : highly perfumed sweet fortified/unfortified wine Reds mostly blends of Bobal, Monastrell, Tempranillo & Garnacha Shorter ageing requirements for DO. Experiments with Cabernet Sauvignon & Chardonnay.
PRODUCTION	5 producers dominate the production.
SUBZONES	Pago El terrerazo = only DO Pagos in the Levante. Focuses on the local Bobal & Merseguera grapes

YECLA THE LEVANTE (SOUTH-EAST SPAIN) (●●●)

SOILS & TOPOGRAPHY	South-east coast, inland west of Alicante. Sandwiched between Alicante & Jumilla 400-800m high.
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	Limestone bedrock w subsoil high in carbonate content or sandy topsoil with clay.
CLIMATE & WEATHER	Mediterranean-continental with long, hot dry summers and mild winters. Very high summer temperatures (up to 39C) Low rainfall (300mm/yr) 3,000h sunlight/yr
VITICULTURE	20,000ha DO since 75 Some vines untouched by Phylloxera. Key hazards: hailstorms (autumn rains).
WINE STYLES	Carbonic maceration common for Joven wines. Predominantly reds from Monastrell (85% of plantings) Only small amount of whites produced. Some Crianza, Reserva and Gran Reserva.
PRODUCTION	Only 3 producers bottle their wine, including Bodegas Castano – 1m btls/ yr, adds Cabernet Sauvignon and Tempranillo to the blend for better more ageworthy quality wines
JUMILLA THE LEVANTE (SOUTH-EAST SPAIN) (● ● ● +sweet)	
SOILS & TOPOGRAPHY	Directly west of Yecla DO Half of the vineyards part of La Mancha. Other half part Murcia. Vineyards in hills up 700m high Hot, dry sandy soil (no phylloxera until 1980s)
CLIMATE & WEATHER	Hot, arid Mediterranean climate. Low rainfall 300mm/yr. 3,000h of sunlight.
VITICULTURE	33,000ha DO since 1966 1980s arrival of Phylloxera > replantings with new varieties. ½ of vineyards in La Mancha & ½ in Murcia > DO managed by Ministry of Agriculture (≠ regional Consejo Regulador)
WINE STYLES	Mainly strong red wines w mainly joven wines but some Crianza and Reserva production too. Reds & Rosados must contain min 50% Monastrell. Some sweet reds made from Monastrell. Reds are full bodied, hi in alcohol and tannins w black fruit, hints of meat and liquorice. <i>COURSE TASTING NOTES: Jumilla - Deep ruby colour. Medium intense nose of black pepper, nutmeg, clove, vanilla, chocolate, brambles. Dry palate with medium acidity, high ripe tannins, high alcohol (giving an almost sweet sensation), full bodied.</i>
PRODUCTION	One of the country's leading DO with recognised high-quality potential San Isidro cooperative dominates the region's production but others e.g. Agapito Rico (Casa Castillo wine) drive quality. Torres also invested heavily in the region.



Spain





