
Wine 200: Sherry, Port and Madeira

Fortified Wine: How It's Made

- Three ways:
- Stop a wine's fermentation before it's complete (sugars remain) by adding a spirit
- Ferment a wine to dry (no sugars remain), then add a spirit to boost alcohol levels and stabilize
- Add spirit to unfermented grape must to create a *mistelle*

Spanish Quality System

- Formed in 1926
 - 1926: Rioja
 - 1927: Jerez
 - 1933: Malaga
- Modified in 1970s and regulated by the Consejo Regulador
- DO = Denominación de Origen
- DOCa = Denominación de Origen Calificada
- DO and DOCa equivalent to EU's DOP
- DO and DOCa have aging requirements (Joven, Crianza, Reserva, Gran Reserva)
- Strong tradition of releasing wines after extended aging
- VCIG = Vinos de Calidad con Indicación Geográfica
- VdIT = Vino de la Tierra
- VCIG and VdIT fall within EU's IGP

Portuguese Quality System

- *Região Demarcada* = original system prior to joining the EU in 1986
- Denominação de Origem Controlada (DOC) → Denominação de Origem Protegida
- Indicação Geográfica Protegida (IGP)
 - If traditionally labeled within Portugal, Vinhos Regional (VR)
- Vinhos de Mesa (table wine)
- Garrafeira indicates minimum aging requirements for table wines:
 - Tinto (red): 30 months, including 12 in bottle
 - Branco (white): 12 months, including 6 in bottle
- Reserva = has ABV at least .5% higher than appellation minimum



- Base wine was traditionally made in new American oak butts; today made in mostly stainless steel
- After fermentation, the base wine (~11-12% ABV) is evaluated; initial classification of *palo* or *gordura*
- Palo: destined for *fino*; fortified to 15-15.5%... Permits flor growth
- Gordura: destined for *oloroso*; fortified to 17-18%... Too alcoholic for flor to grow
- Fortification is with mixture of spirit and older Sherry
- Wines are transferred to old Sherry butts for *sobretablas*

Biological aging = under flor, which protects the wine from oxidation

Oxidative aging = no flor

Solera System

- 1) Wines have fermented and gone through *sobretablas* (about one year stage), where they begin to evolve and are observed, then classified (a second time) by style
- 2) New *añada* (vintage) wine enters style-appropriate solera
- 3) Wine is drawn from the solera; 1 liter drawn = minimum 2 liters must remain. Minimum solera aging before bottling is 2 years.
- 4) *Trasiegos*: Each criadera is replenished with wine from the preceding criadera; flor continues to thrive thanks to oxygen during *trasiegos* and nutrients from *añada*

Sherry Styles

- Fino is entirely protected by flor
 - 15-15.5% ABV
 - Lightest, most delicate, fresh, briny
 - Always dry
- Amontillado is an aged Fino allowed to eventually age oxidatively because the flor dies off, or the winemaker felt it had qualities more suitable for Amontillado and fortified it to 17-18% to enable oxidative aging
 - Style is slightly more robust, caramel colored, nutty, concentrated yet finessed
 - Classically dry though some sweetened versions do exist
- Oloroso has aged exclusively oxidatively
 - Richer texture/ flavor, higher alcohol, more spicy and nutty
 - Naturally dry, but the remaining glycerol can create perception of sweetness
 - Many Olorosos are also sweetened



- Palo Cortado is a rare and coveted “in-between”
 - Very loose description and broad range of styles in practice
 - Flor is present but natural qualities of the wine are richer
 - Delicacy and refinement of a Fino with richness and structure of Oloroso
- Further aged Sherries
 - VOS: *Vinum Optimum Signatum* or Very Old Sherry: solera average age = 20 years or more
 - VORS: Very Old Rare Sherry: solera average age = 30 years or more

Douro

- Douro grows the grapes for Port
- Douro DOP is within the Duriense IGP
- Portugal's first officially recognized appellation (1756)
- Named for Douro River that runs through it, carving valleys through the Marão and Montemuro Mountains
- Continental climate with HOT summers and cold winters; mountains block it from Atlantic
- Granite and schist soil
- Subzones Baixo Corgo, Cima Corgo, Douro Superior
- Table wines (red, white, rosé) released as Douro DOP
- Fortified Port released as Porto DOP

- Port wine and Porto DOP named for the seaside port city of Porto
- Fortified wines would be transferred down the river from Douro to Porto, where they were required to be aged, then shipped
- Therefore, major Port houses are located in Porto (specifically Vila Nova de Gaia suburb), not in the Douro

Port Production

- Preferred red grapes:
 - Touriga Nacional
 - Touriga Francesa
 - Tinta Roriz
 - Tinta Cão
 - Tinta Barroca
 - Tinta Amarela
 - Tinta Francisca
 - Bastardo
 - Mourisco Tinto



- Preferred white grapes:
 - Gouveio
 - Malvasia Fina
 - Viosinho
 - Rabigato
 - Esgana Cão
 - Folgasão
- Grapes are crushed, traditionally in *lagares*
- Quick fermentation with pump-overs to extract color and flavor
- Remove juice from solids (about 2/3 unfermented sugar remains)
- Beneficio: fortify with *aguardente* (neutral grape spirit) to 19-22% ABV
- Aging in pipes (550-620 liter oak barrels)
- Production overseen by Instituto dos Vinhos do Douro e Porto (IVDP)
- Regulations, based on vineyard, to how much wine a grower can fortify each year
- Two overarching styles: ruby (bottle-aged) or tawny (barrel-aged)

Port Styles

RUBY styles:

- **Ruby** – no vintage; aged in bulk for 2-3 years before bottling, sold and drunk young
- **Vintage** – great vintage; aged in cask for 3 years prior to bottling; continues to develop in bottle for decades
- **Single Quinta Vintage** – good vintage; a bottling of only one estate's fruit
- **Late-Bottled Vintage** – good vintage; aged in cask 4-6 years prior to bottling

TAWNY styles:

- **Tawny** – could be a lesser vintage, paler wine, less aging (not typical of true Tawny style)
- **Reserve Tawny** – blend of vintages; minimum 7 years aging in cask
- **Colheita Tawny** – vintage-dated; minimum 7 years aging in cask
- **10, 20, 30, 40-Year-Old Tawny** – blend of vintages; oxidative from longer cask-aging; “tastes like this age”



Madeira

- Madeira archipelago over 600 miles southwest from mainland Portugal
- Wines' distinctive character first developed on ship voyages through the tropics
- Two wine-producing islands: Madeira and Porto Santo and two DOPs: Madeira (fortified) and Madeirense (unfortified)
- Terraced vineyards line perimeter of the island, usually trained in pergola system
- High elevation at center of island, where rainfall is regular; canals bring rainwater down to irrigate vineyards
- Soils are volcanic with limestone
- Growers average less than .5 ha of vines
- Production companies buy fruit from growers, make and typically export wine
- Shipping companies trade wine and bottle it under their own labels
- *Partidistas* store/age wine, then sell to traders later

Madeira Production

- Grapes, from driest to sweetest:
 - Sercial
 - Verdelho
 - Boal (Bual)
 - Malvasia (Malmsey)
 - Tinta Negra comprises 85% of production but is *not* allowed to be listed in label
 - If a bottle does not have a grape listed on label, it's likely Tinta Negra (can be range of sweetness levels)
 - If labeled by grape, must contain 85% said grape; if labeled by grape *and* vintage, must contain 100% of said grape
 - Wine, Embroidery and Handicraft Institute of Madeira (IVBAM) regulates harvesting and production methods

Madeira Styles

- Sercial and Verdelho harvested last; no skin contact; usually fermented to semi-dry
- Bual and Malmsey harvested first; may see some skin contact; brief fermentation leaves high residual sugar
- Fortification is with 95% ABV grape spirit



- *Estufagem* process: coils inside *estufa* tanks circulate hot water, which heat wine to around 120 degrees, caramelizing sugars; minimum time is 3 months
- Minimum 90 days' rest post-estufa process to rest, then aging in cask
- Estufa wines cannot be released until minimum 2 years post harvest
- *Canteiro* wines are aged in an attic, warmed by the sun, for at least 2 years
- *Canteiro* wines cannot be released until minimum 3 years post harvest
- Multi-Vintage Blends:
Reserve = 5-10 years; Special Reserve = 10-15 years; Extra Reserve = 15-20 years
- Colheita: Single vintage (minimum 85%) ; aged at least 5 years in cask
- Frasqueiras: Single vintage (minimum 85%); at least 20 years in cask

