DESSERT WINES, PORTS AND SHERRIES

GENERAL INFO

RESIDUAL SUGAR  SUGAR THAT WAS LEFT AFTER FERMENTATION WHICH WAS NOT TURNED INTO ALCOHOL

DRY WINES = LESS THAN 1% RESIDUAL SUGAR
SWEET WINES = 3-28% RESIDUAL SUGAR

BRIX = A MEASUREMENT OF SUGAR VERSUS JUICE IN A GRAPE OR FRUIT.
Dissolved sugar-to-water mass ratio of liquid
Measures the specific gravity of a liquid
25° BRIX = 25 GRAMS OF SUCROSE TO 75 GRAMS WATER
It is measured at a 20° C or 68° F temperature as a reference

REFRACTOR METER = USED TO MEASURE BRIX IN THE VINEYARD

MUST = THE FRESH PRESSED FRUIT JUICE WHICH IS SWEET

ALCOHOL LEVELS =
IN THE US THE WINES ARE USUALLY AT 14% BECAUSE THEY ARE FORTIFIED.
IN GENERAL DESSERT WINES ARE OF LOWER ALCOHOL LEVELS BECAUSE THE SUGARS BECOME ALCOHOL
US MAKES DRY WINES AT 15% ALC
TYPES OF DESSERT WINES:

LATE HARVEST = GRAPES PICKED LATE IN THE SEASON. GRAPES HAVE OVER-RIPENED WHICH IS CALLED RAISINING
BRIX LEVELS INCREASE IN SUGAR AND DECREASE IN JUICE

BOTRYTIS = NOBLE ROT A FUNGUS THAT OCCURS ON GRAPES AND INCREASES SUGAR LEVELS. IT FEEDS OFF THE WATER AND SUCKS IT OUT LEAVING NECTAR. DURING FERMENTATION THE YEAST CANNOT EAT ALL THE SUGAR AND IT DIIES OUT ONCE IT REACHES A CERTAIN ALCOHOL LEVEL; LEAVING SWEET WINE.

1) GREY ROT = OCCURS IN WET AND HUMID CONDITIONS THIS CAN RESULT IN LOSS OF BUNCHES AND DETROYS FRUIT

2) NOBLE ROT = OCCURS WHEN ARRID CONDITIONS ARE FOLLOWED BY WET CONDITIONS. ASIN SAUTERNES OR TOKAJI

PORTS = FORTIFIED WINES, SWEET WINES OF A LOWER ALCOHOL LEVEL WHICH GET BRANDY ADDED TO THEM TO FORTIFY THEM AND INCREASE ALCOHOL LEVELS

VIN DOUX NATURAL = LATE HARVEST WINES THAT ARE FORTIFIED SUCH AS MUSCAT BEAUNE DE VENISE AND BANYULS

ICE WINES = GRAPES ARE PICKED WHEN THE FROST HAS SET ON THE VINES, GERMANY AND CANADA ARE THE MOST FAMOUS.

STRAW WINES = GRAPES DRIED TO CONCENTRATE JUICE SIMILAR TO ICE WINES BUT IN HOT CLIMATES.
GRAPES ARE DRIED UNDER COVERS, HUNG ON RAFTERS, ON THE ROOFS OR LAID OUT ON MATS IN THE HOT DESERT SUN
CREATE DENSE SWEET WINES LIKE SAUTERNES STYLE

AMARONE = DRY RED WINES
RECİOTO DELLA VALPOLICELLA = SWEET WINES
VIN SANTOS IN TUSCANY; JUMILLA REGION OF SPAIN
Romans were the first, added honey to wine to add length. Today it is used to create alcohol for flabby and under ripened grapes by adding sugar to unfermented grape must.

Invented by French chemist Jean-Antoine-Claude Chaptal, not intended to make wine sweeter, but to add sugar so that alcohol can be created.

Prohibited in California, Australia, Austria, Italy and South Africa.

Allowed in regions which have a low sugar content such as France, Germany and parts of the US. In Germany it is prohibited for the production of Pradikatsweins = QMP. German wines tell you on the label. Top tiers of German wine are banned.

It is used in France to strengthen and preserve wines. Germans started to do it in 1840's after harsh winters which did not allow grapes to ripen. It saved wine production in the Mosel which could have seized after those bad vintages.

Controversy in 20th century: People of the Languedoc protested and rioted when other lesser regions that could not produce wine were producing high quantities of cheap wine driving the price of wine down. Army was sent in to stop protesting. Government responded by raising sugar tax and passed laws to limit amount of sugar which could be added.
THE USE OF CANE SUGAR, BEET SUGAR OR CORN SYRUP
SOME USE BROWN SUGAR OR GRAPE CONCENTRATION
WHEN ADDED THE SUCROSE BREAKS DOWN TO FRUCTOSE AND GLUCOSE
WHICH THE YEAST CAN BEGIN TO TURN INTO ALCOHOL

WARM REGIONS
OPPOSITE OCCURS
REHYDRATION = WATER IS ADDED TO LOWER HIGH SUGAR LEVELS
ACIDIFICATION = ADD TARTRIC ACID TO THE MUST WHICH HAVE HIGH LEVELS OF
SUGAR AND LOW ACIDS

CHAMPAGNE
ADD BRANDY AFTER FERMENTATION & PRIOR TO CORKING = DOSAGE
USED TO INCREASE PRODUCTION BY ADDING SUGAR TO MUST
REVERSE OSMOSIS = REMOVE WATER FROM UNFERMENTED GRAPES TO
INCREASE SUGAR AND LOWERING THE VOLUME OF WINE PRODUCED

EACH GROWING REGION HAS A CERTAIN LEVEL OF CHAPITALIZATION
MUTAGE: ADDING DISTILLED GRAPE SPIRITS TO THE MUST EITHER BEFORE OR MID WAY THROUGH FERMENTATION
VIN DOUX GET 10% ALC ADDED OF 95% ABV
PORTS GET 15% ALC ADDED OF 80% ABV
ALCOHOL LEVELS END UP BEING HIGHER IN PORTS

MUSCAT
MUSCAT IS KNOWN ALL OVER THE WORLD UNDER DIFFERENT NAMES:
MUSCAT BLANC, MUSCAT OF ALEXANDRIA - MOSCATEL, MUSCAT OTTONEL, BLACK MUSCAT
MUSCAT DE RIVESALTES, MUSCAT DE BEAUME-DES-VENISE ARE FORTIFIED LATE HARVEST
KNOWN AS VIN DOUX NATURALS
BEAUME-DES-VENIS = RHONE
RIVESALTES = ROUSSILLON PYRENNES

BANYULS
AN AOC OF FRANCE KNOWN FOR MAKING DESSERT WINES
GRAPES : GRENACH NOIR, GRENACH GRIS, GRENCACHE BLANC, CARIGNAN, MUSCAT
MADE IN THE PORT STYLE; GRAPE SPIRIT IS ADDED MID WAY THROUGH FERMENTATION
WINE IS THEN LEFT IN OAK CASKS OR IN GLASS BOTTLE IN THE SUN TO “MADERISE”
WINES ARE SIMILAR TO PORT WITH LOWER ALCOHOL LEVELS 16%
**HISTORY** = STARTED IN ROMAN TIMES
1794  FIRST ICE WONES IN FRANCONIA AND GERMANY
1830 THE 1ST DOCUMENTATION OF THE 1829 VINTAGE WHICH WAS A HARSH VINTAGE AND
GRAPES FROZE ON THE VINE
WOULD USE THOSE GRAPES FOR ANIMAL FODDER UNTIL THE SWEET JUICE WAS DISCOVERED
19TH CENTURY 6 VINTAGES MADE ICE WINE
BECAME MORE COMMON BY THE INVENTION OF THE BLADDER PRESS

**PRODUCTION**
WINES ARE PICKED LATE IN THE SEASON WHEN FROST HAS BUILT ON THE VINES. USUALLY IN DECEMBER OR JANUARY.
ONLY CAN OCCUR WHEN THE WEATHER ALLOWS FOR THE FROST TO COVER VINES WITHOUT BURNING GRAPES
GRAPES ARE PICKED AT NIGHT WHEN IT IS THE COLDEST
GRAPES ARE IMMEDIATELY SHIPPED TO TEMPERATURE CONTROLLED CELLARS TO BE CRUSHED
WATER MOLECULES ARE FROZEN AND ALL THAT IS LEFT WHEN THE GRAPES ARE CRUSHED IS PURE GRAPE NECTAR
* IT TAKES A LOT OF GRAPES TO GET ENOUGH JUICE
* THE LABOR INVOLVED IS TEDIOUS
* PRODUCTION IS DIFFICULT AND CAN BE SUBJECT TO CHANCE
FOR THESE REASONS THE WINE ARE VERY EXPENSIVE

WINES ARE VERY SWEET, LIKE SYRUP; DARK GOLD COLOR

MAIN GRAPES FOR ICE WINES ARE **riesling and vidal**. RIESLING IS MORE COMMON IN GERMANY
AND VIDAL IN CANADA

SUGARS ARE VERY HIGH SO THEY MAKE GOOD DESSERT PAIRINGS, THEY ARE ALSO A GREAT DESSERT
ON THEIR OWN AND AMAZING WITH CHEESE (BLUE CHEESE)

INNISKILIAN IS A PIONEER IN CANADA USE OF VIDAL
HAS TO HAVE A BRIX LEVEL OF 35°
IN GERMANY THE BRIX NEED TO BE AT 110°
FLAVORS OF PEACH, PEAR, HONEY, FIGS, MANGO, PINEAPPLE & LYCHEE LONG FINISH
LOW ALCOHOL LEVEL AS LOW AS 6%

**CROEXTRACTION** = GRAPES FROZEN AND THEN PRESS LESSER QUALITY
MEASURING THE MUST

**SPECIFIC GRAVITY** finds the specific gravity of a liquid; water is 1% grapes are 1.075%
that extra 7.5% is sugar

**OESCHLES** german; oeschles value shows specific gravity 75° = 1.075 an auslese = 83°

**BRIX/BALLING** percentage of grape juice accounting for by dissolved solids
75° oeschle = 18° brix

**BAUMÉ** scale to derive the alcoholic strength of juice if fermented to total dryness
16.5 g of sugar produces 1% alc
75° oeschle = 10° baume = 1% alc

WAYS OF INCREASING SWEETNESS

1) LET THE GRAPES GROW LATE INTO THE HARVEST AND NATURALLY BECOME RIPER

2) ADD SUGAR
   - **CHAPITALIZATION** = ADD CANE SUGAR OR HONEY BEFORE FERMENTATION
   - **SÜSSRESERVE** = “RESERVE OF SWEETNESS” ADDING UNFERMENTED MUST AFTER FERMENTATION

3) FORTIFICATION = ADDING BRANDY OR GRAPE SPIRITS SO THAT FERMENTATION IS STOPPED AND LEAVES A SWEET WINE
   - **VIN DOUX NATURAL**
   - PORT, SHERRY, MADEIRA, MARSALA AND VERMOUTH
   - **MISTELLE** = **APPERTIFS** = ADD BRANDY TO UNFERMENTED OR PARTLY FERMENTED JUICE

4) REMOVE WATER TO CONCENTRATE WINE
   - WARM CLIMATES= AIR DRYING WINES KNOWN AS RAISIN WINES
   - FROSTY CLIMATES = ICE WINE, FREEZING WATER
   - DAMP CLIMATES = BOTRYTIS CINEREA, GREY MOLD A FUNGAL INFECTION WHICH FEEDS OFF THE WATER IN THE GRAPE

5) **GREEN HARVESTING** = PRUNING AND EXPOSING GRAPES TO THE SUN . LESS GRAPES ON BUNCH MORE SUN EXPOSURE. USED IN WINES SUCH AS ASULÈSE
when occurs the fungus feeds off water and leaves only solids, sugars, fruit acids and minerals = concentrated grape juice
these wines have aromas of honeysuckle with a bitter finish
fermentation becomes very complex because of the intensity of the sugars the yeasts can die and the alcohol production seize
many times the yeasts are nurtured through the night

Botrytis Bunch Rot
affects the bunched of grapes and results in high losses
this occurs when the fungus begins to grow at the start of frost, if the grapes are wounded they can be infected by bunch rot. a cure is the use of fungicides when botrytis occurs in horticulture it results in inedible fruits
SAUTERNES
GRAVES REGION OF BORDEAUX, FRANCE

HISTORY = WINE PRODUCTION IN REGION DATES BACK TO ROMANS
SWEET WINE WAS NOT PRODUCED UNTIL 17TH CENTURY

WHILE ENGLISH WERE BUYING REDS (CLARETS), AND GERMANS FOCUSED ON BEER
PRODUCTION THE DUTCH INVESTED IN WHITES OF THE REGION
INTRODUCED GERMAN WINEMAKING TECHNIQUES
THE USE OF SULFUR TO STOP FERMENTATION = BURNING BRIMSTONE CANDLES
BOTRYTIS WAS NOT USED UNTIL 18TH CENTURY

THOMAS JEFFERSON BECAME A HUGE FAN OF THESE WINES
SAUTERNES IS CLASSIFIED AS PRIMER CRU SUPERIOR

CLIMATE
LOCTAED IN A MARITIME CLIMATE IS
SUSPETIBLE TO FROST AND HAIL

IT IS LOCATED ON THE GARONNE RIVER
AND NEXT TO CIRON, WHICH HAS NATURAL SPRINGS

THE MIX OF THE WATER OF THE COOL GARONNE AND THE WARM SPRINGS
CREATES A MIST OVER THE VINEYARDS

WITH THE SUN THIS CAUSES HUMIDITY
AND THE ENABLES BOTRYTIS TO GROW.
**PRODUCTION** = THE USE OF BOTRYTIS WHICH RETAINS TARTRIC ACID AND DEVELOPS SUGARS

HAND PICKED BOTRYTIS GRAPES

VERY LITTLE JUICE CAN BE EXTRACTED FROM RAISINED GRAPES

1 VINE CAN NOT PRODUCE 1 GLASS OF WINE

SOME PRODUCERS USE CO-EXTRACTION = FREEZING GRAPES TP REMOVE WATER AND MAKES IT EASIER TO GET CONCENTRATION FROM NOT SO DEVELOPED GRAPES

THIS IS USED IN POOR VINTAGES

FERMENTED IN NEW OAK BARRELS

FERMENTED TO ABOUT 14% ALC SOME WILL GO MORE WITH SPECIAL YEASTS

THEN IT IS AGED IN OAK FOR 18-36 MONTHS

**GRAPES** = SEMILLON 75-90%, SAUVIGNON BLANC & MUSCADELLE

SEMILLON HAS THIN SKIN AND GETS BOTRYTIS EASILY

SAUVIGNON BLANC DEVELOPES THE ACIDITY

MUSCADELLE ADDS AROMA

**FLAVORS OF PEACHES, HONEY AND APRICOTS ARE CLASSIC THEY HAVE A LONG FINISH AND ACIDITY**

**CAN AGE FOR 100 YEARS**

chateau d’yquem is the most famous 1st growth
The world's oldest botrytis wine is made in Hungary, with its first appellation control dating back 120 years prior to Bordeaux.

**SOIL** = Clay, loes, and volcanic sub soil

**CLIMATE** = Sunny, south-facing vineyards, cold winters

**GRAPE VARIETIES** = Furmint 60%, Harsleveü, yellow muscat, Zéta

**CELLARS** = Carved out of rock for constant temperature 10-20°C; mold at 85-90% humidity

**HISTORY** = Started back in Celtic times B.C.

So much a part of Hungarian culture; it is mentioned in their national anthem.

Furmint is used because it has a second skin which saves the first skin from rot.

Grapes are harvested in December.

**ASZU** = Sweet Tokaji; topaz color, the most prized Tokaji.

**PRODUCTION**

Picked and made into a paste known as dough.

Must is poured on dough for 24-48 hours, constantly stirring.

It is then put in casks and fermented.

**PUTTONYOS** = The measurement of how much dough was put into each cask.

Today, it is the measurement of sugar and sugar extract in the wine somewhere between 3-6 puttonyos.

**ASZU ESZENCIA** = Has a puttonyos level of 6 or more $$$$

**ESZENCIA** = Nectar, is the run-off juice of the grapes and is super sweet.

It is at times added to aszu.

It is fermented but only produces 5-6% alc, takes up to 4 years to ferment.

It can last up to 200 years.
**VIN SANTO**

WINES FROM TUSCANY ITALY

MADE WITH TREBBIANO, MALVASIA OR SANGIOVESE (ROSE STYLES)

WINES ARE LAID TO DRY IN THE CELLAR UNDER STAIRCASES OR ON RAFTERS

ROOMS ARE KEPT WARM AND WELL VENTILATED SO MOISTURE BEGINS TO EVAPORATE LEAVING CONCENTRATED BERRIES

GRAPES ARE CRUSHED AND FERMENTATION STARTS; VIN SANTO FROM PREVIOUS VINTAGES IS ADDED TO START THE FERMENTATION

WINE IS THEN TRANSFERED INTO SMALL OAK BARREL AND AGED 3-10 YEARS TRADITIONALLY THEY WERE MADE IN CHESTNUT BARRELS USED

*ULLAGE* = SPACE OF AIR TO CAUSE OXIDATION

SOME PRODUCERS STILL USE CHESTNUT, JUNIPER OR CHERRY WOOD. OTHERS WILL BLEND BARRELS TO ADD DISTINCTIVE FLAVORS

STYLES WILL RANGE FROM BONE DRY TO VERY SWEET BOTRYTIS STYLE SOME WILL BE FORTIFIED; VIN SANTO LIQUOROSO

**JUMILLA**

WAS NOT STRUCK WITH PHYLOXERA, BECAME VERY POPULAR, UNTIL 1989 IT STRUCK THE USE OF MONSTRELLE (MOURVEDRE), PETIT VERDOT, GRANACHA OR SYRAH

VERY ARID AND CONTINENTAL CLIMATE

GRAPES ARE LAID OUT ON DIRT OR CANVAS MATS AND ROASTED IN THE SUN DEVELOPE DEEP RICH DARK COLORS

RAISIN AND PORT-LIKE
vinho de jerez = white grapes from jerez spain

KNOWN AS SACK = SACA REMOVE FROM THE SOLERA
MOST COm EFROM THE SHERRY TRIANGLE IN THE PROVINCE OF CADIZ
JEREZ DE LA FRONTERA
SANLÚCAR DE BARRAMEDA
EL PUERTO DE SANTA MARIA

SHERRY = FORTIFICATION TAKES PLACE AFTER FERMENTATION
PORT = FORTIFICATION TAKES PLACE MID WAY THROUGH FORTIFICATION

HISTORY
UNDER MOORISH RULE NAMED THE AREA SHERISH = SHERRY & JEREZ
MOORS PUT BAN ON ALCOHOL PRODUCTION UNTIL LOCAL GROWERS MADE THE CASE THAT THEY NEEDED TO GROW GRAPES TP GROW RAISINS FOR THE ARMY
16TH CENTURY JEREZ HAD A REPUTATION AS THE BEST WINES OF THAT ERA
CADIZ WAS AN IMPORTANT SEAPORT
ENGLISH TOOK LIKING TO THE WINES OF THAT REGION NAD THERE BECAME A DEMAND
END OF THE 19TH CENTURY PHYLLOXERA DESTROYED THE VINEYARDS, ONLY THE LARGE HOUSES WERE ABLE TO REPLANT AND SMALL PRODUCERS STOPPED MAKING WINES

GRAPES
PALOMINO = DRY SHERRIES, 90% OF SHERRY IS MADE WITH PALOMINO
PEDRO XIMENZ = SWEET WINES, DREID IN THE SUN TO CONCENTRATE FLAVORS
MOSCATEL = LESS COMMON, SIMILAR TO PEDRO XIMENZ
PRODUCTION

*MUSTO DE YEMA* = 1ST PRESSING ONLY THE ORIGINAL MUST
FERMENTED IN STEEL VATS TO PRODUCE A DRY WINE

WINE IS SAMPLED AND CLASSIFIED ACCORDING TO POTENTIAL

/ = FINEST FLAVOR & AROMA = FORTIFIED TO 15% ALC TO ALLOW THE GROWTH OF THE FLOR

O = MORE FULL BODIED, FORTIFIED TO 17.5% ALC TO PREVENT FLOR. AGED TO OXIDIZE AS AN Oloroso

// = WINES WHICH NEED TO DEVELOPE MORE; FORTIFIED TO 15% ALC TO MAKE AN AMONTILLADO OR Oloroso

/// = POOR WINE WILL BE DISTILLED

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Flor – the key to Sherry wines

- Film of natural (local) yeasts – different strains of *saccharomyces ellipsoideous*.
- Protects the wine from oxidation.
- Continuous interaction with the wine:
  - consumption of remaining sugars, dissolved oxygen, alcohol, glycerine...
  - production of acetaldehydes, carbon dioxide...
SOLERA METHOD

WINE IS PUT IN CASKS 5/6TH FULL TO ALLOW THE FLOR AT TOP

*FLOR* = SACCHAROMYES ARE YEASTS IN THE AIR THAT FORM FROM ALCOHOL THAT BUILDS AT
TOP OF THE BARREL IT COVERS THE WINE AND SHIELDS IT FROM OXIDATION
IF FLOR DIES WINE BECOMES OXIDIZED AND BECOMES AN AMONTILLADO

BARRELS ARE STACKED ANY WHERE FROM 3 TO 9 ROWS HIGH

WINE IS GENTLY MOVED FROM THE TOP BARREL TO THE BOTTOM BY THE USE OF A CANOA
RUNNING THE SCALES = AS WINE MOVES TO THE BOTTOM BARREL AND FROM THERE IT GETS
BOTTLED

AGE OF THE WINE IS DETERMENIED BY HOW MANY BARRELS IT GOES THROUGH
IT WILL ALWAYS HAVE A MIXTURE OF OLD WINE

SHERRY IN THE BOTTLE DOES NOT AGE WELL UNLESS IT HAS BEEN OXIDIZED
BEST TO STORE UPRIGHT TO MINIMIZE SURFACE AREA

FINOS & MANZANILLAS ARE FRAGILE
AMONTILLADO, Olorosso & CREAM LAST MONTHS
PEDRO XIMENEZ LASTS A LONG TIME

BOTTLES SHOW AGE 7005 = YEAR AND DATE; THE FIFTH DAY OF 2007
005007 = DAY & YEAR = FIFTH DAY OF 2007
**Types of Sherry**

*FINO* = The lightest and driest sherry. Has a biological smell. Was under the flor the entire time.

*MANZANILLA* = A fino from Sanlúcar de Barrameda; has a chamomile flavor, can be salty since they are manufactured next to the sea.

*AMONTILLADO* = Darker than a fino, lighter than an oloroso. Starts as a fino but the flor breaks and oxidation begins. It gets fortified immediately to 17.5% then goes into solera to be oxidized. Can have a biological smell with more sweetness than a fino. Used as an aperitif. Good with olives, nuts or cheese.

*OLOROSO* = Darker and sweeter, nutty and high glycerine. The flor is killed early with fortification usually a fuller bodied wine from the onset. Put in solera for oxidation and aging to increase color and strength. There are dry olorosos as well. Sweet oloroso is blended with Pedro Ximenez.

*PALO CORTADO* = Begins as a fino/manzanilla, naturally loses flor and begins to oxidize. Has the richness of an oloroso and crispness of a fino. Marked on the barrel / fortified to 17% alc as it matures more alcohol is added and more sticks are added to let you know the aging potential.

*PEDRO XIMENZ = PX* = Raisin wine, grapes are dried in the sun, fortified and aged in solera. Flavors of raisin and molasses, very rich wines.

**Other Region of Note Montilla-Moriles**
madeira

**Wine from the Island of Madeira in Portugal**

Winemaking goes back to the age of exploration when Madeira was used as a port of call. To prevent wine from spoiling during shipping, they added grape spirits to fortify Madeira’s unique flavor was discovered when ships would return with unsold barrels.

“Vinho de roda” = wine made a round trip

The barrels had been heated for long periods of time by the sun and excessive movement which caused a unique flavor.

Today, it is made by heating the wine to 140° F and oxidizing it, creating robust wines which can last a long time after being opened.

Wine is stored in rooms called “Estufas” = ovens which are heated by the sun.

18th century the American colonies consumed about 25% of all Madeira.

**Grapes Used:** Sercial, Bual, Verdelho & Malvasia

- **Bual & Mavasía** = SWEETER WINES
- **Sercial, Verdelho, Tinta Negre** = MORE DRY

**Estufagem**

*Cuba de calor* = Low quality, bulk aged in steel or concrete and heated with coils or pipes wrapped around barrel by the use of hot water at 130° F for 90 days.

*Armazen de calor* = Wine is large wooden casks in special rooms with steam coming from pipes to create a suana. Aged for 6-12 months. A more gentle process.

*Canterio* = High quality; stored in winery in warm rooms heated by the sun for 20-100 years. A mild pasteurization and exposure to air.

*Reserva* = Min. 5 years

*Special Reserva* = 10 years aged naturally. No artificial heat.

*Extra Reserva* = 15 years, rich and rarer.

*Colheita* = Single vintage aged less than vintage Madeira.

*Vintage* = From a vintage and aged 20 years.

Can last opened up to 1 year. Can last closed up to 150 years.
English began shipping wines to England because they could not ship French wine because of war. Thus many wineries bore English names such as Taylor-Fladgate, Smith-Woodhouse & Grahams.

These wines are aged in oak for long periods of time which increases the cost of the wines. Because they are fortified they last a lot longer when they have been opened, sometimes several months to a year.

**CLIMATE**

Located on the Douro River Valley; nestled between Atlantic and Sierra Marão. Divided into three regions; **Baixo Corgo** (wet, low end tawnys & rubys); **Cima Corgo** (higher quality, vintage and LBV); **Douro Superior** (very small amount of port).

Steep slopes along the river.

**GRAPES**

Touriga Nacional, Touriga Francesa, Tinta Barracão, Tinta Cão & Tinta Roriz (Tempranillo)

These grapes have small dense concentrated fruit.

**WHAT IS IT**

Port is made with red grapes that has been fortified with aguardiente, a brandy; to stop fermentation and retain sweetness of fruit. Alcohol levels are 16-20%
styles of port

REDUCTIVE AGING = WINES THAT HAVE BEEN PUT DIRECTLY IN BOTTLE TO MINIMIZE OXYGEN

OXIDATIVE AGING = WINES PUT INTO BARREL TO OXIDIZE AND AGE. TAWNYS

TAWNY PORTS
these wines are done in the solera method
the wines evaporate in barrels and they become oxidized.
they are gold and brown in color and are very nutty
tawny without vintage is about 7 years old
10yr, 20yr, 30yr & 40yr tawnys are an average age of what the blended barrels might be

COLHEITA
like tawnys but from a single vintage and spend up to 20 years in barrel.
vintage will be written on the bottle

GARAFEIRA
uncommon type; wines spend 3-6yrs in barrel and then spend 8 more in large glass vessels called demijohns and then they are bottled

RUBY PORTS
less expensive ports, aged 3 years in barrel.
hey are darker and richer than tawnys and have a bright fruity character;
does not improve with age

LBV LATE BOTTLE VINTAGE
designated to be a vintage port but spends too much time in barrel.
some are fined and filtered others are not.
they have a vintage and are lighter than vintage ports
filtered lbv’s do not last long; unfiltered age better in bottle
to tell the difference an unfiltered has a traditional cork

VINTAGE PORTS
a single vintage, houses decide two years after the vintage to declare.
only finest vinatges
aged up to 2 years in barrel and bottled unfiltered and aged 10-30 years in bottle