



BEGINNER

CELLARING & STORAGE

Content contributed by Brice Dowling, Imperial Beverage

The term “aging like fine wine”, although in common usage, is a derivative of a practice and process not so commonly understood. All wines are subject to the same chemical process that causes them to age, but the time it takes for each to reach its peak varies according to the juice in the bottle and the conditions under which it is stored. For best results when storing wine, one must consider how wine ages, which wines are candidates for cellaring, and where wine should be stored.

Wine ages as oxygen interacts with the acids, sugars, minerals, and other compounds found in the wine. These oxidized compounds form larger, more complex molecules that change both scents and flavor profiles. Sufficient oxygen to stimulate the aging process is found dissolved in the liquid and in the headspace between the wine and the cork.

“ All wines are subject to the same chemical process that causes them to age, but the time it takes for each to reach its peak varies according to the juice in the bottle and the conditions under which it is stored. ”



Some wines are more suitable than others for cellaring, the practice of storing wine in a controlled environment until it has matured to its peak drinking age. Consumer demand dictates that most wine is produced to be drunk within a year of bottling. However, the best (and, typically, most expensive) wines of the world are sold well before they have reached their peak. For reds, these tend to be highly tannic wines from dryer vintages or regions. The best Old World examples are Crus Classes of Bordeaux, Chateauf-neuf-du-Pape, Barolo, Brunello di Montalcino, Chianti Classico Riserva, Ribera del Duero, and Rioja; while the New World offers Cabernet from California, along with Zinfandel, Merlot, and Pinot Noir, and Malbec from Argentina.

Contrary to some notions, reds are not the only wines suitable for cellaring. Many whites with high acidity and sufficient structure are also age-worthy. Sweet fortified wines are often good candidates for aging, as well.

“ The best (and, typically, most expensive) wines of the world are sold well before they have reached their peak. ”

Those wines that are worth waiting years to drink should be properly stored in order to maximize their maturation process. The basic principles of wine storage include light restriction, temperature stability, and moderate humidity. Consistent direct light will cause undesirable chemical reactions, as will fluctuations in temperature. 50°F, plus or minus 10°, is the optimal temperature; but consistency is the most important factor. Heat does increase the maturation process, and temperatures exceeding 90°F should be avoided.

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As oxygen is the agent in aging wine, air exposure to the liquid must be limited. For this reason, and because many wine bottles still use a cork closure, some moisture in the air is beneficial. This keeps the cork from drying out and letting more air into the bottle. This is the same reason that wine bottles are best stored on their sides, or even upside down. Large format bottles are oftentimes preferred due to the lower ratio of air in the bottle to volume (and surface area), thus slowing the oxidative process on the wine.

While many professionals and collectors rely on specially built and maintained facilities to store and protect their wine during the maturation process, any place fulfilling these principles would work. One of the easiest places to convert to a wine storage area in many homes is underneath the basement stairs, hence the term cellaring. So long as this spot is not near a window, furnace, dehumidifier, etc., a converted staircase may allow even a novice enthusiast to begin a collection, all of which have begun with a single bottle.

“ Contrary to some notions, reds are not the only wines suitable for cellaring. ”





BEGINNER

CLASSIFICATION OF BORDEAUX

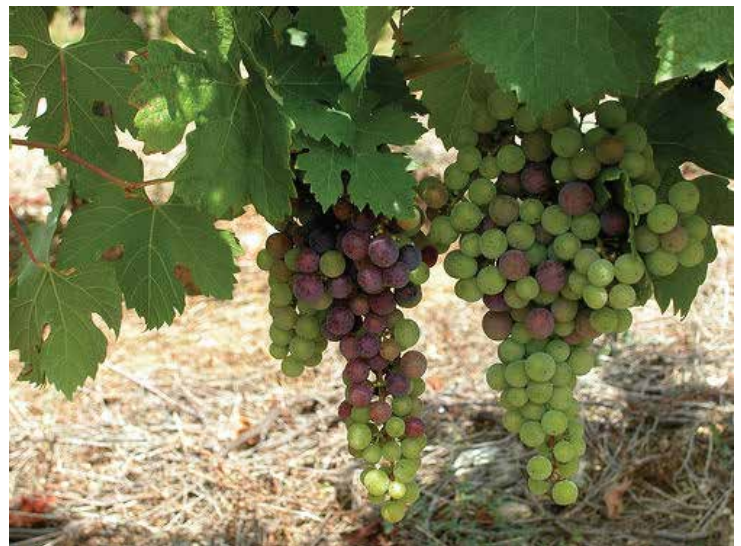
Content contributed by Kimberly Bricker, Imperial Beverage

Do you ever hear about a bottle of wine selling for \$3,000 and wonder what makes it so special? While part of the answer is subjective, another answer is the 1855 Classification of Bordeaux.

Paris was preparing to host the World's Fair in 1855. London had established their international supremacy by their World's Exhibition of 1851, which featured the Crystal Palace (or glass house). France and England have a long storied past of being at odds with a constant competitive energy between them. The wine industry of Spain and Portugal, in its entirety (at the time), was created by the British who, at various times throughout history, didn't want to buy wine from the French. Napoleon III was determined to show England the supremacy of France and spent approximately five million dollars to that end. Wine has always been one of the great achievements France has contributed to the world. Napoleon III thought it would be a good idea to create an official classification of the world's best wines. The Chamber of Commerce of Bordeaux was given the daunting task to rate the chateaus of Bordeaux. They decided to have the local wine merchants create this political minefield of a list instead. The ranking of each chateau was done entirely upon the prices their wine fetched. While this can vaguely be interpreted to be a verdict on their quality it is important to remember it was on price alone that these chateaus were ranked. After a brief two weeks the local merchants produced a list of 58 chateaus- including 4 first growths, 12 second growths, 14 third growths, 11 fourth growths, and 17 fifth growths. In 1973, after much campaigning, Mouton-Rothschild was promoted from a second growth to a first growth. This is the only change made to the classification since its inception. There are currently 61 classified chateaus due to divisions of property over the years.



Of note is that this system ranks the Chateaux rather than the land. Over time some chateaus have grown significantly in land size. Some chateaus have various plots of land that are not even contiguous. Many chateaus have been divided, or held split ownership, due to Napoleons Law of Succession. (This eliminated primogeniture, or the policy of the oldest son inheriting everything upon the death of his father, and decreed that all assets be divided equally among the children.) Some first growths have taken over lesser growths, gained their land, and thus all the wine produced is labeled as a first growth. The newer land is also typically used to create a 'second label' wine that



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represents the high quality of the chateaux but not quite the best it has to offer. Presently the classified wines of Bordeaux represent such large sums of money that they are rarely held in private ownership. Most of these prestigious grand chateaus are owned by large corporations.

While much has changed since 1855, the classification remains the same. These wines were, and remain, benchmarks for the heights wine can reach. You never forget the powerful and mysterious taste of your first 1st growth even if the current prices ensure that few will have the opportunity.

RECOMMENDED FURTHER READING

Because this topic is so broad, and detail on each of the 60+ classified chateaux locations would be severely cumbersome, Raising the Bar has provided the following links. For more reading on the topic of Classifications of Bordeaux, be sure to visit these sites:

Jancis Robinson

<http://www.jancisrobinson.com/ocw/CH768.html>

Analysis of wine price change and reevaluation/reclassification

<http://www.thewinecellarinsider.com/2011/05/livex-exchange-updates-1855-bordeaux-classification/>

Reflections of Clive Coates MW

<http://www.clive-coates.com/observations/classifications-old-and-new>

Berry Brothers and Rudd on the 1855 Classification

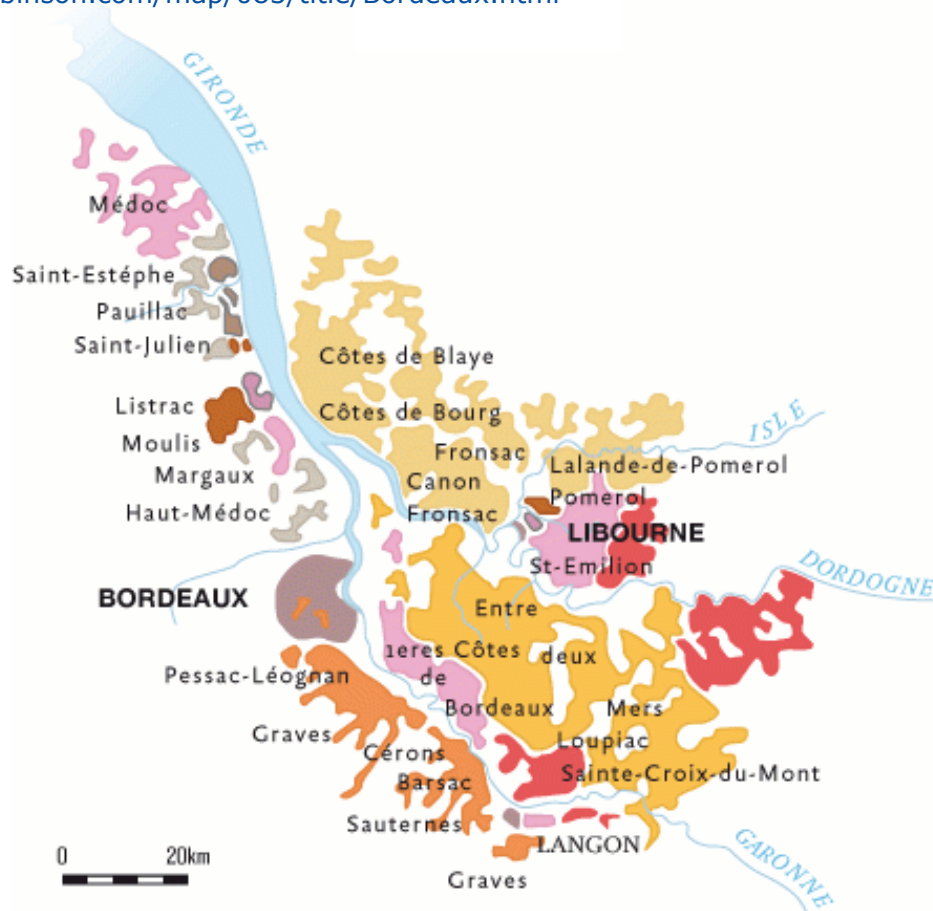
<http://www.bbr.com/wine-knowledge/bord-classifications>

Revised classification- based on current prices

<http://www.wineanorak.com/blog/2009/03/new-1855-bordeaux-classification.html>

Map of Bordeaux

<http://www.jancisrobinson.com/map/083/title/Bordeaux.html>



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CHART OF BORDEAUX GROWTH CLASSIFICATIONS

1855 Classification

Village, Acreage, Production, 2nd Label, Owner, and Pricing

FIRST GROWTHS

Chateau	Village	Acres under Vine	Production cases- 1 st wine	2 nd label Production and Name	Owner	2009 prices: 1 st and 2 nd wine
Ch Lafite-Rothschild	Pauillac	282	20,000	25,000 Carruades de Lafite	Eric Rothschild family	\$1260-\$2248 \$328-\$500
Ch Margaux	Margaux	225	12,500	16,600 Pavillon Rouge	Corine Mentzelopoulos	\$900-\$1832 \$144-\$250
Ch Latour	Pauillac	200	11,000	12,000 Les Forts de Latour	Francois Pinault	\$1654-\$2423 \$250-\$413
Ch Haut Brion	Pessac-Leognan	119red (7white)	10-12,000red 750white	8-10,000 Le Clarence de Haut-Brion	Dillon family	\$900-\$2197 \$117-\$174
Ch Mouton-Rothschild	Pauillac	210	14,150	8,300 Le Petit Mouton de Mouton Rothschild	Rothschild family	\$400-\$1599 \$127-\$198

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SECOND GROWTHS

Ch Rauzan-Segla	Margaux	153	10-12,000	12,000 Segla	Wertheimer family (of Chanel fame)	\$89-\$252 \$40
Ch Rauzan-Gassies	Margaux	74	6,500-7,500	1,250-1,650 Le Chevalier de Rauzan-Gassies	Jean-Michel Quie	\$41-\$56 \$23
Ch Leoville-Las-Cases	St. Julien	240	10-20,000	15-25,000 Le Petit Lion de Marquis de las Cases	Delon family	\$292-\$450 \$52-\$70
Ch Leoville Poyferre	St. Julien	200	18-20,000	7-13,000 Ch Moulin Riche	Cuvelier family	\$172-\$417 \$24-\$40
Ch Leoville Barton	St. Julien	119	20,800	7,500 La Reserve de Leoville Barton	Anthony Barton	\$92-\$170 \$36-\$41
Ch Durfort-Vivens	Margaux	74	15,000	Vivens de Durfort-Vivens	Lurton family	\$38-\$66 \$21-\$26
Ch Gruaud-Larose	St. Julien	200	15,000	20,000 Sarget de Gruard Larose	Taillan group (Merlaut family)	\$76-\$120 \$19-\$37
Ch Lascombes	Margaux	207	20,830	5,830 Chevalier de Lascombes	Colony Capital	\$80-\$121 \$25-\$31
Ch Brane-Cantenac	Margaux	183	15,000	10-12,000 Le Baron de Brane	Lurton family	\$70-\$167 \$24-\$29
Ch Pichon-Longueville	Pauillac	178	16,650	12,500 Les Tourelles de Longueville	AXA Millesimes	\$150-\$325 \$37-\$80
Ch Pichon-Longueville-Comtesse de Lalande	Pauillac	215	19,150	15,000 Reserve de la Comtesse	Rouzard family (also own Roederer)	\$170-\$266 \$40-\$58
Ch Ducru-Beaucaillou	St. Estephe	185	9-12,000	10-12,000 Croix de Beaucaillou	Boric family	\$275-\$458 \$50-\$57
Ch Cos d'Estournel	St. Estephe	220	21-25,000	5-6,500 Les Pagodes de Cos	Michel Reybier	\$350+ \$53-\$78
Ch Montrose	St. Estephe	173	18,350	6,650 La Dame de Montrose	Bouyges family	\$220-\$450 \$40-\$75

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THIRD GROWTHS

Ch Kirwan	Margaux	86	16,000	4,000 Les Charmes de Kirwan	Schyler family	\$54-\$79 \$37-\$44
Ch d'Issan	Margaux	111	8-10,000	7-9,000 Blason d'Issan	Cruse family	\$59-\$101 \$23-\$32
Ch Lagrange	St. Julien	290	25,000	35,000 Les Fiefs de Lagrange	Suntory	\$50-\$80 \$24-\$38
Ch Langoa Barton	St. Julien	61	8,000 total	Lady Langoa	Anthony Barton	\$60-\$82 \$50-\$57
Ch Giscours	Margaux	210	18-23,000	6-9,500 La Sirene de Giscours	Eric Jelgersma	\$58-\$96 \$23-\$30
Ch Malescot St-Exupery	Margaux	58	13,500	3,500 La Dame de Malescot	Zuger family	\$95-\$149 \$35
Ch Boyd-Cantenac	Margaux	42	9,000	3,000 Jacques Boyd	Lucien Guillemet	\$44-\$71 \$42
Ch Cantenac-Brown	Margaux	133	11,000	7,500 Brio de Cantenac Brown	Simon Halibi	\$58-\$100 \$28
Ch Palmer	Margaux	136	10,000	8,000 Alter Ego	Sichel, and Mahler-Besse families	\$290-\$420 \$48-\$85
Ch La Lagune	Haut-Medoc	200	6-11,000	12-16,500 Le Moulin de La Lagune	Jean-Jacques Frey (owns Jaboulet)	\$58-\$90 \$33
Ch Desmirail	Margaux	74	7,000	Initial de Desmirail	Denis Lurton	\$28-\$44 \$23
Ch Calon-Segur	Margaux	114	12-15,000	4-7,000 Ch Marquis de Calon	Gasqueton and Hanappier families	\$86-\$167 \$27
Ch Ferriere	Margaux	19	3,000	1,000 Les Remparts de Ferriere	Claire Villars	\$33-\$54 \$24
Ch Marquis d'Alesme Becker	Margaux	39	8,000	2,000 Marquis d'Alesme	Perrodo family	\$28-\$34 \$19

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FOURTH GROWTHS

Ch St-Pierre	St. Julien	42	5,400	No 2 nd label	Henri Martin	\$83- \$159
Ch Talbot	St. Julien	264	30,000	10-15,000 Connetable de Talbot	Jean-Paul Bignon	\$54- \$86 \$28
Ch Branaire-Ducru	St. Julien	119	12,500	7,500 Duluc de Branaire- Ducru	Patrick Maroteaux	\$66- \$120 \$25- \$35
Ch Duhart-Milon Rothschild	Pauillac	180	22-25,000	5-7,000 Moulin de Duhart	Eric Rothschild family	\$124- \$208 \$51
Ch Pouget	Margaux	42	3,000	2,000 Antoine Pouget	Pierre Guillemet	\$83- \$103 \$48
Ch La Tour Carnet	Haut-Medoc	160	15,000	9,000 Les Douves de Carnet	Bernard Magrez	\$32- \$46 \$17
Ch Lafon-Rochet	St. Estephe	111	12,000	8,000 Les Pelerins de Lafon- Rochet	Michel Tesson	\$18- \$70 \$22
Ch Beychevelle	St. Julian	222	20-23,000	10-12,500 Admiral de Beychevelle	GMF & Suntory	\$70- \$170 \$41
Ch Prieure-Lichine	Margaux	172	20,000	7,000 Confidences de Prieure- Lichine	Balande Group	\$46- \$80 \$25
Ch Marquis de Terme	Margaux	94	12,000	2,500 Les Gondats de Marquis de Terme	Seneclauze family	\$38- \$57

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FIFTH GROWTHS

Ch Pontet-Canet	Pauillac	200	20,000	8,000 Les Hauts de Pontet-Canet	Alfred Tesseron	\$172-\$800 \$46
Ch Batailley	Pauillac	141	21-25,000	No 2 nd label	Philippe Casteja	\$47-\$71
Ch Haut-Batailley	Pauillac	76	10,000	1,700 Tour d'Aspic	Francios Borie	\$37-\$60 \$43
Ch Grand-Puy-Lacoste	Pauillac	136	15,400	8,330 Lacoste-Borie	Francios Borie	\$78-\$142 \$28
Ch Grand-Puy-Ducasse	Pauillac	74	18,000	2,000 Prelude a Grand-Puy Ducasse	Cordier-Mestrezat	\$42-\$72 \$25
Ch Lynch-Bages	Pauillac	240	35,000	16,000 Echo de Lynch-Bages	Cazes family	\$145-\$333 \$44
Ch Lynch-Moussas	Pauillac	148	20,000	2-5,000 Les Hauts de Lynch Moussas	Casteja family	\$30-\$45 \$14
Ch Dauzac	Margaux	111	19,000	2-4,000 La Bastide de Dauzac	MAIF	\$42-\$59 \$35
Ch d'Armailhac	Pauillac	123	22,000	No 2 nd label	Phillipine Rothschild	\$44-\$74
Ch du Tertre	Margaux	123	18,000	4-5,000 Les Hauts du Tertre	Eric Jelgersma	\$19-\$66 \$22
Ch Haut-Bages Liberal	Pauillac	69	9,000	6,500c La Chapelle de Bages	Taillan group (Merlaut family)	\$36-\$61 \$41
Ch Pedesclaux	Pauillac	89	8,000	1,600 Fleur de Pedesclaux	Jacky Lorenzetti	\$32-\$40 \$24
Ch Belgrave	Haut-Medoc	148	21,000	9,000 Diane de Belgrave	CVBG	\$30-\$40 \$19
Ch du Camensac	Haut-Medoc	172	20,000	10,000 La Closerie de Camensac	Elise Forner	\$13-\$34 \$14
Ch Cos Labory	St. Estephe	44	7,500	3,330 Le Charme Labory	Weber family	\$31-\$46 \$25
Ch Clerc Milon	Pauillac	106	14,000	None	Rothschild family	\$65-\$105
Ch Croizet-Bages	Pauillac	74	12,500	La Tourelle de Croizet-Bages	Quie family	\$28-\$38 \$19
Ch Cantemerle	Haut-Medoc	222	33,500	13,500 Les Allees de Cantemerle	SMABTP (insurance co)	\$33-\$60 21

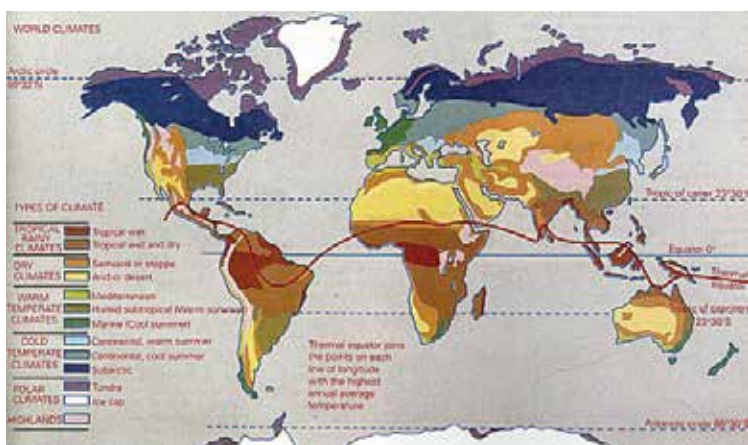


BEGINNER CLIMATE

Content contributed by Anne Drummond, Imperial Beverage

THE WINKLER SCALE

The Winkler scale, sometimes known as the heat summation method, is a technique for classifying the climate of grape growing regions. In the system, geographical areas are divided into five climate regions based on temperature, known as Regions I through V.



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HOW THE WINKLER SCALE WORKS

Developed at the University of California, Davis by A. J. Winkler and Maynard Amerine, the system is based on the hypothesis that grapevines do not grow if the temperature is below 50 °F (10 °C). Days of growth in the specified growing region are hypothesized as follows:

Northern Hemisphere	April 1-October 31
Southern Hemisphere	October 1-April 30

Of these days, each is assigned “degree days” according to the amount that the day’s average temperature exceeds its threshold; one degree day per degree Fahrenheit over 50 degrees. Celsius may be used, but should be multiplied by 1.8 to convert to Fahrenheit degree days for the following list. All days in the locale are then added up, with the sum used to determine the region's classification as follows:

- 2,500 degree days or fewer: Region I
- 2,501 3,000 degree days: Region II
- 3,001 3,500 degree days: Region III
- 3,501 4,000 degree days: Region IV
- Greater than 4,000 degree days: Region V

The system is used officially in California, and other United States growing regions such as Oregon and Washington. It is less widely used elsewhere. However degree days can be computed for any location for which detailed climate data is available.

“ Of these days, each is assigned “degree days” according to the amount that the day’s average temperature exceeds its threshold; one degree day per degree Fahrenheit over 50 degrees. ”



APPLYING THE WINKLER SCALE

Different varieties of grapes are generally considered to best thrive in certain climate regions.

Region I	Coolest	Cote d'Or, Champagne, Rhine, Willamette Valley	Chardonnay, Pinot Noir, Riesling
Region II		Bordeaux	Chardonnay, Pinot Noir, Riesling, Cabernet Sauvignon, Sauvignon Blanc, Cabernet Franc, Merlot
Region III		Rhone	Sauvignon Blanc, Semillon, Syrah, Zinfandel
Region IV		Spain	Barbera, Touriga Franca, Tinta Roriz, Tinta Barroca, Touriga Nacional, Tinto Cao, Tinta Amarela
Region V	Hottest	North Africa	Muscat, Verdlho

California has growing regions which lie in all five regions; from Mendocino and Sonoma in the north (which lie in regions I-III) to the San Joaquin Valley and points south, which lie in regions IV and V.

AREAS FOR CONCERN; LIMITATIONS

The climate regions of California only describe one aspect of an area's climate mean daily temperature. Many other important factors that contribute to a region's suitability for viticulture (and its terroir) are excluded; among them sun exposure, latitude, precipitation, soil conditions, the likeliness of extreme weather, which might damage grapevines, and pollution. The climate regions are also macroscopic in nature; there is often a wide variety of microclimates in a given geographical area, and a region that has marginal grape-growing weather overall may have microclimates that produce excellent grapes. A notable example is the Willamette Valley (firmly within region I), which was long regarded as too cold and wet to grow grapes, yet has vineyards planted on numerous south-facing hills in the rain shadow of the Coast range, which produce world-class Pinot Noir and many other excellent wines.

“ California has growing regions which lie in all five regions; from Mendocino and Sonoma in the north (which lie in regions I-III) to the San Joaquin Valley and points south, which lie in regions IV and V. ”



More complex climate indices have been introduced to address perceived shortcomings in the Winkler scale.

In viticulture, there are several levels of regional climates that are used to describe the terroir or immutable characteristics of an area. These levels can be as broad as a macroclimate, which includes entire wine regions or as small as a microclimate, which includes the unique environment around an individual grapevine. In the middle is the mesoclimate, which usually describes the characteristics of a particular vineyard site.

LEVELS:

Macroclimate, in viticulture, refers to the regional climate of a broad area such as an American Viticultural Area (AVA) or a French Appellation d'origine contrôlée (AOC). It can include an area on the scale of tens to hundreds of kilometers. On smaller scales are the related designations of mesoclimate and microclimate.

Mesoclimate refers to the climate of a particular vineyard site and is generally restricted to a space of tens or hundreds of meters.

Microclimate refers to the specific environment in a small restricted space-such as a row of vines. The more delineated term "canopy microclimate" refers to the environment around an individual grapevine.[1] Although many viticulturists use the term "microclimate" when talking about an individual vine and the effects of canopy management.



BEGINNER CLOSURES

Content contributed by Jenny Parker, Imperial Beverage

Screw caps have been associated with cheap wines in the past and have had some serious perception hurdles. However, they are definitely on the rise with many winemakers in the U.S. and abroad. New Zealand is leading the wine industry with the majority of wineries converting from cork to cap. Wineries in Australia, Spain, South Africa, South America, Canada, the U.S. and France are all testing the capping trend as well.

Currently there are three ways to close a bottle of wine: natural cork, synthetic cork and screw caps.

“ A majority of the world’s corks are grown and harvested in Portugal. ”



NATURAL CORKS

Natural cork closures have a centuries-long heritage; however, they allow for a bottle of wine to be “corked” as the saying goes. A “corked” bottle has a musty smell and taste, and can be a deceiving term in some ways. A “corked” bottle’s musty taste has little or nothing to do with the cork itself. Though not true in all cases, this most often stems from the sterilizing compound mixing with bacteria in the bottle or further, the wine as the bottle is filled. The compound that is produced is known as Trichloroanisole (TCA). TCA is an anisole derivative (a chemical compound) that occurs during the sanitization process when and if airborne bacteria or fungi undergo a chemical reaction with chlorinated phenolic cleaning compounds (usually bleach). In other words, TCA is a byproduct of a chemical reaction between cleaning bleaching compounds and bacteria. It is estimated that about 5-10% of wines available on merchants’ shelves are “corked”. A majority of the world’s corks are grown and harvested in Portugal.

SYNTHETIC CORKS

Synthetic corks, derived from plastic, appeared to be a viable alternative to traditional corks. However, their track record has been tarnished due to their inability to keep oxidation at bay for any real length of time, significantly decreasing the shelf life of a wine and short-changing the maturing process of select wines. On average they are warranted to prevent oxidation of the wine in the bottle for 2 years.

SCREW CAPS

Screw caps provide the best seal for bottled wines, and eliminate both the “corked” and oxidation problem. New Zealand is the leader in using screw-cap closures for its wines. While screw caps do diminish the drama and romance of bottle opening it is well worth the sacrifice to ensure an untainted wine that offers consistent aging, maintained flavor and freshness with optimum quality control.



“ New Zealand is leading the wine industry with the majority of wineries converting from cork to cap. Wineries in Australia, Spain, South Africa, South America, Canada, the U.S. and France are all testing the capping trend as well. ”



BEGINNER COMMONLY ENCOUNTERED WINE FAULTS



Material contained in this document applies to multiple course levels. Reference your syllabus to determine specific areas of study.

Content contributed by Rob De La Rosa, Imperial Beverage

The situation is common. The wine you have ordered arrives at your table, the bottle is opened, a taste is poured and the wine smells wrong. You are not sure what is behind the malodorous scent, but you are quite sure it smells of moldy attic. You are desperate to send it back, but nervous the "attic" excuse will come off as uninformed and incorrect. Don't worry because there is a method to decoding wine faults so that no one should have to suffer through the unpleasantness of a flawed wine.

Taste, however, is the most arbitrary dimension of wine and it can be affected by everything from your morning coffee to the waiter's hand soap. The flavors of a wine, what you taste, are probably not that much different from what the next person might taste. Therefore, below are listed the most encountered faults among all wines. Each one affects different facets of a wine's structure, but all of them take away from the intended experience of the winemaker and the true expression (read: flavor) of the grapes.

TRICHLOROANISOLE ("TCA")

This wine fault is actually the one of the most common. Caused by chlorine-contaminated cork bark or wood, which in turn leads to what we know as "cork taint" or "corked" wines. Affected wines smell of moldy or wet cardboard, musty air, etc., lack fruit intensity on the palate and are destined to grow more intensely foul-smelling as the problem persists.

BRETTANOMYCES ("BRETT")

Caused by the spoilage yeast *Brettanomyces*, "Brett" - as this fault is most often called - leads affected wines to smell like a host of unpleasant descriptors (barnyard, sweaty saddle, chicken coop and wet dog are some of the more colorful ways it's been characterized). In low concentrations, Brett can be interpreted by some tasters as pleasant, but if it overwhelms, ask to try a different wine as additional bottles of the same wine are likely to be affected.

VOLATILE ACIDITY ("VA")

The result of the overproduction of acetic acid and ethyl acetate in wine, this fairly common wine fault causes its vinous victims to smell of aromas including nail polish remover, vinegar and paint thinner. In its most intense incarnations, wines with excessive VA come across simply as vinegar both in aroma and taste. This can also be a widespread problem among bottles of the same wine, generally if one bottle out of a case shows this then they all will.



OXIDATION

Occasionally described as maderized, this fault occurs in table wines that have been needlessly exposed to oxygen through poor handling or rapid temperature changes (most often heat-related) during their life in the winery or in the bottle. Affected wines will turn brown in color, a defect most apparent in whites, and taste stale, flat or generally lifeless.

BEGINNER WINE FAULTS

MERCAPTANS

Caused by the improper handling of sulphur compounds in the winery, this fault results in wines that smell unappetizingly like skunks or rotten eggs. Easily one of the most unpleasant wine faults in terms of off-scents it produces, mercaptans is thankfully encountered rather infrequently.

CLOUDINESS / HAZINESS

Cloudiness in a wine is a visual flaw that most often does not indicate a serious problem unless the cloudiness is excessive. Unfiltered wines are known for being a bit more opaque than their crystal-clear, filtered cousins, though this is not technically a flaw; if your wine resembles a something seriously murky, however, it could be mycoderma, a yeast-related fault that can affect not only clarity but taste as well.



TARTRATE CRYSTALS

Perhaps the most visually shocking of all wine faults, tartrate crystals resemble tiny shards of glass in the bottom of some white wine bottles - but are in fact harmless. Known to present in wines that have not been cold stabilized (as is often the case with many European whites), tartrate crystals are formed from solidified potassium or calcium (cream of tartar) and present no threat to the flavor of the wine.

HERBACIOUSNESS ("GREEN FLAVORS")

Not to be confused with herbaciousness as aroma or flavor in a wine. This is an overabundance of methoxypyrozone that produce a cooked green pepper or highly vegetal aroma. It is found predominantly in red wines where early picking or harvesting in wet conditions is commonly practiced.

BUBBLES

Occasionally you will find yourself uncorking a so-called "still wine" that boasts a few or a lot of bubbles in its midst. When seen in young white wines, particularly off-dry versions such as Vinho Verde, Mosel Riesling, etc., this is often intentional, as a touch of CO₂ is known to make these wines taste light and refreshing. In an older red, however, bubbles signal an unintentional secondary fermentation in the bottle, and are most definitely a fault.



BEGINNER

FORTIFIED WINE PRODUCTION

Content contributed by Kimberly Bricker, Imperial Beverage

Wine was originally fortified, or strengthened, to better sustain itself during the journey to those importing it. The addition of brandy or neutral grape spirit would kill off the yeasts, which are constantly in the process of converting sugars to alcohol. Once the alcohol by volume reaches 16-18%, yeasts die. The remaining sugars are never converted into alcohol, and the natural sugars of the wine persist. Wines can be fortified at various stages in their fermentation, sweetened or colored with a variety of techniques. Different grape varieties can be used. Grapes can be dried. Wines can be boiled and reduced, cooked, aged in a solera, or aged in a boat that travels halfway across the world and back. They can be enjoyed immediately or aged for over 200 years.

Port, Sherry, Madeira, Marsala, Malaga, Montilla-Moriles, and Vin Doux Naturels (VDN's) are all Fortified Wines.

Most people think of stuffy British old men drinking out of little glasses in a mahogany library with their pinkies out when they think of Sherry- if they think of Sherry. While that image may have relegated Sherry, as an old-fashioned wine, to the back of the cool class, that is only part of the picture. Both Christopher Columbus and Ferdinand Magellan filled their ships with Sherry when they set sail to discover the New World. Jackie Kennedy drank Sherry- and so did James Bond. The Beatles enjoyed Sherry and even traveled to Jerez and autographed some large casks. Tom Waits always enjoys his Sherry. Every top chef, including Ferran Adrià, Thomas Keller, Grant Achatz, Jose Andres, and Wylie Dufresne, touts the taste and pairing ability of Sherry. People in Spain drink Sherry with their meals, and chug it in celebration after winning a soccer match! But if you don't like Sherry, and think it is a drink for your grandma, that just means more delicious Sherry for the rest of us to enjoy.

Today Sherry is lauded by a small group from the culinary curious to expert epicurean leaders. Sherry is made in a wide variety of styles, sweetness levels, and alcohol strength. It is the least acidic and most aldehydic wine in the world! An Aldehyde is an oxidized alcohol and adds aromas of roasted nuts, caramel, and straw.

This legendary fortified wine is made in Jerez de la Frontera, Sanlúcar de Barrameda, and Puerto Santa Maria in the Andalusia region of Southwest Spain. Palomino, Pedro Ximenez, and Muscat of Alexandria are the only three authorized grapes in the region. Palomino is the primary varietal and accounts for 95% of all vineyard plantings. The Jerez DO (Denominacion de Origen) is distinguished by its chalky porous Albariza soils. There are two main types of Sherry: Fino and Oloroso.

“ Sherry
“Oh I must've been a dreamer
And I must've been someone else
And we should've been over
Oh Sherry, our love
Holds on, holds on...”
'Oh Sherry' by Steve Perry”

“ Both Christopher Columbus and Ferdinand Magellan filled their ships with Sherry when they set sail to discover the New World. ”

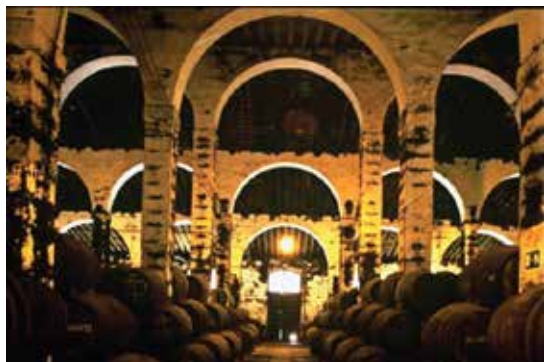
BEGINNER FORTIFIED WINE PRODUCTION

Fino has a final alcohol of 15.5%, is the finest quality, and ages biologically (in contact with the film of yeasts called flor).

Oloroso has a final alcohol of 18%, is lesser quality, and ages physiochemically (in direct contact with air).

Let's make some Sherry!

Palomino grapes, and occasionally others, are pressed. This occurs most frequently with a bladder press. Acidification takes place if necessary, and then the wine is racked. Fermentation lasts three to seven days and takes place at 75-84°F/24-29°C. Wild yeast ferments the wine, as opposed to selected yeast strains being inoculated into the wine. (Wild yeast fermentation results in a wine with more rose/floral/honey aromas, a wild rustic nature, and maderized/sherry aromas.) Malolactic fermentation occurs, and the whole process takes place mostly in stainless steel tanks. Now that the base wine is made, it is classified into Fino or Oloroso. Fino is the palest, clearest, and best and tends to come from the highest percentage of Albariza soils, free run juice, older vines, and delicately handled fruit. A base wine is classified as Oloroso when it is not the palest and clearest. Color, clarity, aroma, and flavor are all analyzed to determine what category of Sherry it will be. If it is not clearly one type or the other the wine can be classified as mosto sobretablas, or undecided.



“ Sherry is made in a wide variety of styles, sweetness levels, and alcohol strength. It is the least acidic and most aldehydic wine in the world! An Aldehyde is an oxidized alcohol and adds aromas of roasted nuts, caramel, and straw. ”

FINO has a final alcohol of 15.5%, is the finest quality, and ages biologically (in contact with the film of yeasts called flor).

OLOROSO has a final alcohol of 18%, is lesser quality, and ages physiochemically (in direct contact with air).

Now for the fortification. For Fino, a half neutral grape spirit half sherry mixture is added, which brings the alcohol level up to 15-15.5%. Olorosos are increased to 18% alcohol by volume with the addition of neutral grape spirits. The aging process comes next, and this is one of the unique features of Sherry. In the Fino casks, a flor develops. This is a yeast in the same family of the yeasts that turn grape juice to wine, but a different strain (*Saccharomyces Cerevisiae Beticus*). This film of yeasts can only develop in a humid aerobic environment. Development is encouraged by seasoned barrels, absence of residual sugar, less than 16% alcohol, and a high acid wine. Flor ages the Sherry biochemically. It basically eats the acids and ethanol and converts them into aldehydes and fusel oils. The barrel is then aged within the solera system. This is a tiered system of stacked barrels with the youngest vintage put in barrels at the top. The last tier is actually called solera and all the younger tiers are called criaderas (nurseries). A simple solera can be composed of three or four rows of criaderas and a complex solera can contain as many as 14. Once the wine from the solera (oldest wine on the bottom row in this case) is drawn off (usually just 10-15% of the barrel) and bottled, it is replaced with wine from the first row above and then everything is moved down. The very top is filled up with the newest, youngest wine. At bottling, anywhere from 5-34% of the oldest wine can be bottled- but never more than 35%. Bottling too much would weaken or dilute the whole solera.

Before bottling, the Sherry can be sweetened, color added, and/or alcohol added depending on the style

“ Wild yeast fermentation results in a wine with more rose/floral/honey aromas, a wild rustic nature, and maderized/sherry aromas. ”

desired. Pedro Ximenez grapes are used in creating sweetening agents and Moscatel adds the coloring. Vino de Color is Moscatel grape juice reduced to 1/3 to 1/2 its original volume. This is typically used to make East Indian and Brown Sherries. Vino Dulce is raisinated Pedro Ximenez or Palomino grapes. Dulce Apadago is unfermented grape must with grape spirits added or sweet wine with fermentation arrested by adding grape spirits. Dulce Alimbar is a sweet mixture of half glucose and half fructose.

SHERRY Job Aid



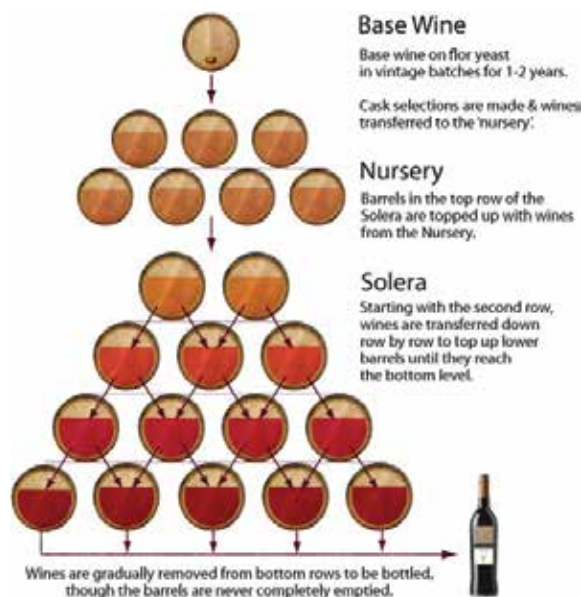
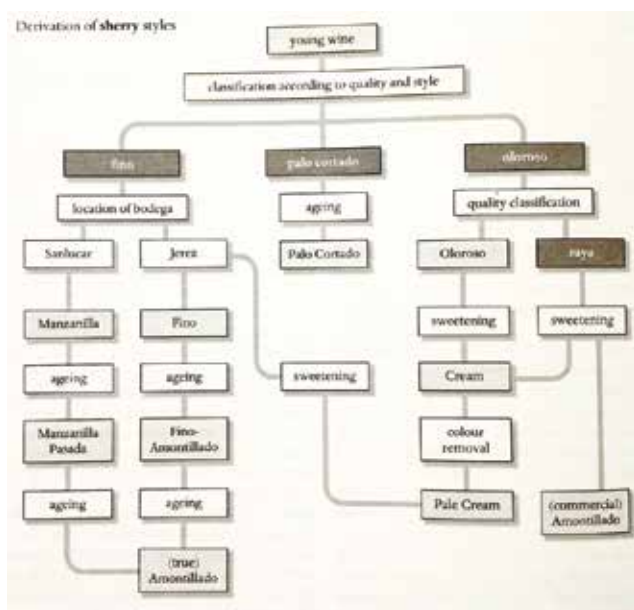
Sherry	Description	Variations
Fino Sherry	Fino Sherry is made from the Palomino grape alone. Its unique flavor and aroma is derived from the biological action of flor and controlled oxidation. It is one of the least acidic and most aldehydic wines in the world with a taste that is very similar to roasted almonds.	<ul style="list-style-type: none"> • Palma: the most delicate of Finos • Entre-Fino: a Fino lacking in delicacy • Palma Cortada: a more robust Fino, leaning toward Amontillado in style • Pale Cream Sherry: a Fino sweetened with dulce de alimbar • Fino-Amontillado/ Amontillado-Fino: as the flor thins and dies, the wine picks up body, a richer, nuttier nose, and more intense flavors, morphing from Fino-Amontillado into Amontillado-Fino
Manzanilla Sherry	<p>A Manzanilla Sherry is a type of Fino that has biologically aged in contact with flor. It is particularly aromatic due to the predominance of the yeast <i>S. Beticus</i> in the velo.</p> <p><i>S. Beticus</i> characteristically thrives in the cooler, more humid, maritime climate of Sanlúcar de Barrameda; thus, Manzanilla Sherries can only be made from butts aged in this town. It tastes like salted, roasted almonds.</p>	<ul style="list-style-type: none"> • Manzanilla Pasada: a Manzanilla that has lost its flor and matures in direct contact with the air for a short to moderate period of time • Manzanilla Amontillado: a Manzanilla that has lost its flor and matures for a prolonged time in direct contact with air

BEGINNER FORTIFIED WINE PRODUCTION

SHERRY Job Aid

<p>Amontillado Sherry</p>	<p>An Amontillado sherry begins its life as a Fino. After the flor dies, this Sherry spends considerable time aging in direct contact with the air deepening in color, filling out in body and picking up more pronounced maderized aromas and flavors. Its flavor profile is often likened to roasted hazelnuts.</p> <p>You will note that the only difference between an Amontillado and a Manzanilla-Amontillado is that the Manzanillas are aged in Sanlúcar de Barrameda. Otherwise, the process is the same.</p>	<ul style="list-style-type: none"> • Pale Cream Sherry: an Amontillado sweetened with vino dulce or dulce de almibar • Medium Sherry: an Amontillado sweetened with vino dulce
<p>Palo-Cortado is an extremely rare Sherry. The aging is all physiochemical—no flor. It has the aroma of an Amontillado, without having had any contact with film yeast, yet the flavor and color of an Oloroso. Few soleras of Palo Cortado have been maintainable since the phylloxera epidemic, and it is uncertain as to why. Palo Cortado tends to lose its ability to straddle the gustatory middle-road between the two Sherry styles and degenerates into a full-blown Oloroso, now that the vines are grafted onto American rootstocks.</p>		
<p>Oloroso Sherry</p>	<p>Oloroso Sherry is aged through the pure physiochemical process of oxidation. An Oloroso changes in color from light to dark brown as it ages, increasing in body, alcohol and aroma. Glycerin gives a perception of sweetness to an otherwise dry wine. Olorosos taste like toasted pecans.</p>	<p>(all sweetened)</p> <ul style="list-style-type: none"> • Cream/Milk Sherry: A British favorite, originating in the town of Bristol • Brown Sherry: a very dark, sweet Sherry; a blend of Raya, Oloroso, vino de color and vino dulce • Pajarete: an extremely sweet form of Brown Sherry • East India Sherry: a form of Sherry whose flavor profile simulates that created by the bygone practice of placing Sherry into the holds of sailing ships as they traversed the tropics. The heat and the movement of the ship concentrated flavors and matured the wines more quickly.
<p>Raya Sherry</p>	<p>Rayas are aged through the pure physiochemical process of oxidation. They are similar to Olorosos in flavor, but have less delicate aromas.</p>	<ul style="list-style-type: none"> • Rayas Olorosos: a better, less coarse Raya • Rayas Finas: a lighter-styled Raya

BEGINNER FORTIFIED WINE PRODUCTION



Sherry - Styles & Solera

PORT

"Sip your spirits and cure your cold, but I will take Port that will cure all things, even a bad character. For there was never a port drinker who lacked friends to speak for him" –William Thackeray

Port was created because the English hated the French. At times, French wine was prohibited to be imported into England, and at other times high punitive taxes were levied on French goods. While the English had long been a fan of the great wines of Bordeaux (it was the closest wine region to England and easiest to ship), they explored other options to get their wine fix on. The deep, rich, tannic wines of Portugal's Douro were discovered. To ensure safe travel on the ship back to England brandy was added to stabilize and protect the wine.

Port comes from the Oporto region in Northern Portugal in the Douro Valley (its name meaning 'River of Gold'). Within the Douro Valley there are three sub regions: Baixo Corgo, Cima Corgo, and Douro Superior. The soil here is comprised of schist, granite, sand, clay, and quartz. A vineyard ranking system has been established to identify the best land. Created by the Cadastro, this system evaluates soil composition, production/yields, slope, stoniness, locality, altitude, shelter, sun exposure/aspect, grape varieties, training method, age of vines, and density. Scored on each category the highest score possible is 2,031 points- but any property with over 1,200 points gets an A rating. To receive an F, or failing grade, a vineyard must score fewer than 200 points. The Instituto do Vinho do Porto (IVP) controls overall Port production, can inspect a port house anytime, and calculates how much Port can be produced each vintage. The production permitted is based on the Cadastro rankings and point system. Poor F ranked vineyards rarely get to make any Port- but no real loss as who wants to drink a failing Port? The Casa do Douro is the governing body that represents growers and the Comissao Interprofessional da Regiao Demarcada do Douro (CIRDD) represents both growers and shippers. Port is traditionally made in Douro in Northern Portugal and shipped down the Douro River to Villa Nova de Gaia. Along with Istanbul, Villa Nova de Gaia is the most humid city in Europe. High humidity supports the aging process with low evaporation. While Port no longer has to be aged in Villa Nova de Gaia, it usually still is. When aged in the hot Douro, there is a noticeable caramelization of flavors commonly referred to as Douro Bake.

“ The Douro is one on the oldest delimited wine regions, being demarcated as an official production zone in 1756. While there are 80 grape varieties allowed in Port, only eight are recommended. ”

BEGINNER FORTIFIED WINE PRODUCTION

“ Port has a residual sugar of 8-12% (but legally it can range from less than 4% to more than 13%). This puts port in the sugar range of soda (Coke= 10.8%, Pepsi=11.55%, Mountain Dew=12.4%, and Red Bull =10.8%) but port is typically served in 2-3 ounce portions. ”



Transporting barrels of Port

The Douro is one of the oldest delimited wine regions, being demarcated as an official production zone in 1756. While there are 80 grape varieties allowed in Port, only eight are recommended:

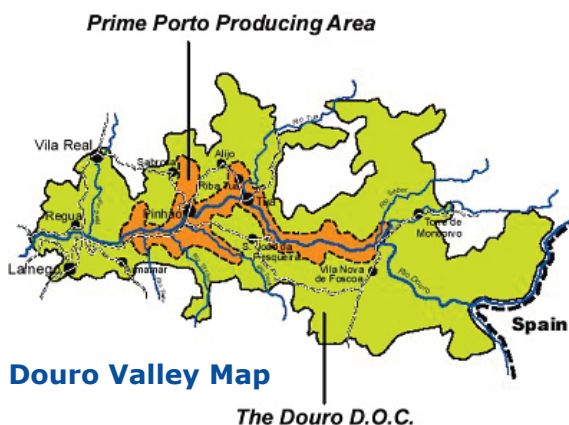
Red varieties: Touriga Nacional, Touriga Franca, Tinta Barroca, Tinta Roriz (also known as Tempranillo), and Tinta Cao

White varieties: Gouveio (also known as Verdelho), Malvasia Fina, and Viosinho

Let's make some Port!

To make Port the fermentation is arrested by adding grape spirits, which stops the fermentation (conversion of sugars to alcohol) that results in a sweet wine. The shorter fermentation time could mean less color and tannin extraction. To concentrate the pigment and tannins an aggressive pressing and maceration take place. The grapes were traditionally pressed by vineyard workers feet (feet are strong enough to crush the skin and pulp while keeping the bitter pip intact) in large shallow lagares. Wild yeasts begin the fermentation, fermentation gets hotter, and more pigment and tannins are extracted. After 24-36 hours, the fermenting grape juice is about half converted to wine, initial sugar measurement of 12-13 Baume has been half converted to alcohol leaving 6-8 Baume. The juice/wine is transferred from the large square lagares where it is pressed into giant vats. A neutral grape spirit, Aguardente, is added that is about 77% alcohol by volume. Geropiga, or extra sweet Port, can be added to the blend to increase sugar if necessary. Once the alcohol is added, it reaches 18-20% ABV and all ambient yeasts are killed. The alcohol level is too high for yeasts to live and continue converting sugar to alcohol so the fermentation process is completed. The resulting Port has a residual sugar of 8-12% (but legally it can range from less than 4% to more than 13%). This puts port in the sugar range of soda (Coke= 10.8%, Pepsi=11.55%, Mountain Dew=12.4%, and Red Bull =10.8%), but port is typically served in 2-3 ounce portions.

Sidenote: The high sugar content of Port wine does not make it ideal for volume consumption. If you ever find yourself in Portugal drinking Port all night chances are high you will wake up with a serious hangover!



There are several types of Port and they fall into two categories:

Bottle Aged - Vintage and Single Quinta Ports- the reductive aging process means the wine will deteriorate faster once the bottle is opened.

Barrel Aged - all other Ports - the oxidative aging process means the wine will hold flavor for longer periods once the bottle is opened.

-Small barrel aging is used to make Tawny Port in a controlled oxidative process.

-Large barrel aging is used to make Ruby Port to retain its color.

BEGINNER FORTIFIED WINE PRODUCTION

PORT Job Aid

Bottle-Aged Port

Port Type:	Blend of:	Filtered/ Fined?	Aging Regimen	Of Note:
Vintage (ruby)	Grapes Vineyards	No; it will throw a crust.	2 yrs in cask	Takes 10 yrs or more to mature.
Single Quinta Vintage (ruby)	Grapes	No; it will throw a crust.	2 yrs in cask	Takes 10 yrs or more to mature.

Wood-Aged Port

Port Type:	Blend of:	Filtered/ Fined?	Aging Regimen	Of Note:
Simple Ruby	Grapes Vineyards Vintages	Yes; no Crust	3 yrs in cask	
Simple Tawny	Grapes Vineyards Vintages	Yes; no crust	3 yrs in cask	
Late-Bottled Vintage (LBV) (ruby)	Grapes Vineyards	Optional	4-6 yrs in cask	Filtered LBVs receive a T-cork; unfiltered LBVs receive a driven cork. This is a single vintage port, bottled late.
Vintage-Character (ruby)	Grapes Vineyards Vintages	Yes; no crust	4-6 yrs in cask	This is NOT a vintage port. It is a blend of several.
Old Tawnies	Grapes Vineyards Vintages	Yes; no crust	10-40 yrs in cask	
Colheita (tawny)	Grapes Vineyards	Yes; no crust	7 yrs minimum in cask, can stay up to 10-50 yrs in wood	This single-vintage tawny is the rarest of all port.
White	Grapes Vineyards Vintages	Yes; no crust	3-4 yrs in cask	There are two styles: Dry: 3% RS Normal: 6% RS

BEGINNER FORTIFIED WINE PRODUCTION

MADEIRA

Madeira is delicious, adventurous, and the longest lived fortified wine. Bottles of Madeira from 1795 have recently been poured by the glass at a few top restaurants. Imagine drinking a bottle of wine that was made during the presidency of George Washington!

In Shakespeare's Henry IV, the Prince of Wales is accused of selling his soul for a glass of Malmsey (Madeira) and a chicken leg. Thomas Jefferson, George Washington, John Adams, and Benjamin Franklin all enjoyed Madeira. The inauguration of George Washington as President, Washington chosen as the capital city, and the writing on the Declaration of Independence were all historic moments marked with a glass of Madeira.

The island of Madeira, where the fine fortified wine is made, was discovered by Joao Goncalves Zarco 'the one eye' or 'the squinter.' Yep, a rugged old warrior pirate of a man discovered the island that makes the refined and posh Maderia. When his ship neared the island he described "there hung over the sea a thick impenetrable darkness, which was guarded by a strange noise." They believed they had found the gates to Hell.

Good old Zarco populated the island with prisoners and grape vines. Madeira takes its name from the Portuguese word for wood, as the island was covered with ancient trees. Legend has it that he accidentally set the island on fire and that it burned for seven years. All the charred tree ashes helped to create the rich fertile soil of Madeira. The island's location well off the Southern Portuguese coast in the Atlantic Ocean made it an ideal stopping point for travel to the West Indies the New World, England, and many other destinations. Originally an unfortified table wine, the wines of Madeira frequently traveled on Dutch East India Company boats to India. The long hot voyage transformed the wines into something even more spectacular. Vinho da Roda was a type of early Madeira that aged on a ship for a round trip to India and back. By the 1800's estufas, or hot rooms, were created to simulate this voyage and transform the wine of Madeira into Madeira. Alcohol was added to protect the wine from breaking down, and this practice was standard by the 1750's.

There are five main grapes used in Madeira production and each has its own unique style and classification. Sercial and Verdelho are fermented until almost dry and then fortified. Bual and Malmsey are fortified earlier in fermentation.

- Sercial- this is the driest and tastes of almonds (.5-1.5% RS)
- Verdelho- moderately sweet and smokey (1.5-2.5% RS)
- Bual- Sweet and raisiny (2.5-3.5% RS)
- Malmsey- The sweetest with nutty and grapey flavors (3.5-6.5% RS)
- Tinta Negra Mole- the most widely planted grape on the island, but only used in the production of bulk Madeira. It is fermented dry and then fortified.



Madeira Zarco



“ There are five main grapes used in Madeira production and each has its own unique style and classification: Sercial and Verdelho are fermented until almost dry and then fortified. Bual and Malmsey are fortified earlier in fermentation. ”

BEGINNER FORTIFIED WINE PRODUCTION

Madeira can be made in three ways:

- Wine is in a concrete vat, and hot water (as hot as 122F/50C) circulates through a coil submerged in the vat. The maderization process takes 3 months, and then it is sweetened and fortified. This is the cheapest and fastest method.
- Wine is in a cask, and fortified prior to heating for a more integral flavor. An estufa (or oven at 85-105F/30-40C) heats a hot room, called a Armazens de color, for 6 to 12 months.
- Fortified wine is aged in a cask in a non-temperature controlled warehouse. This process takes several years, and is an expensive lengthy process.

The resulting wine should be 17-18% ABV.

MADEIRA Job Aid

Types Of Madeira

Type of Madeira	Sugar Level	Flavor Characteristics
Sercial	Dry; .5-1.5% RS	Almonds
Verdelho	Semi-Sweet; 1.5-2.5 % RS	Smoky
Bual	Sweet; 2.5-3.5 % RS	Raisin-like
Malmsey	Very Sweet; 3.5-6.5% RS	Nutty grapiness

Madeira Classifications

Type of Madeira	Age	Type of Estufa	Type of Aging	Bottle age?	Grape Varieties	Of Note:
Granel	18 mo	Tank	Bulk	None	Tinta Negra Mole	Represents 40% of the island's production
Finest	3-yrs	Tank	Bulk	None	Tinta Negra Mole	
Reserve	5-yrs	Tank	Bulk	None	Tinta Negra Mole	Some of the wine may have spent time in cask
Special Reserve	10-yrs	Cask	Cask	None	Noble Grape Varieties	
Extra Reserve	15-yrs	Cask	Cask	None	Noble Grape Varieties	
Vintage	20-yrs	Cask	Cask	2-yrs	Noble Grape Varieties	Made from one vintage

MARSALA

Marsala is made on the Italian island of Sicily in both sweet and dry styles. Catarratto, Grillo, and Inzolia are the grape varieties used and the blend is fortified during fermentation. Marsala production began in Sicily when a British lover of Sherry, Port, and Madeira named John Woodhouse noticed that Sicily had a good climate for fortified wine production. Marsala can be fortified in two different ways: Grape spirit can be added or late picked must mixed with alcohol (sifone) can be added. Marsala can also fall into three color categories: Oro (golden), Ambra (amber- sweetened by mosto cotto or concentrated must), and Rubino (ruby).

BEGINNER FORTIFIED WINE PRODUCTION

Marsala is categorized into sweetness level in the following way:

Secco (dry)- 4% RS

Semisecco (semidry)- 4-10% RS

Sweet- more than 10% RS

Marsala is categorized according to aging regimen:

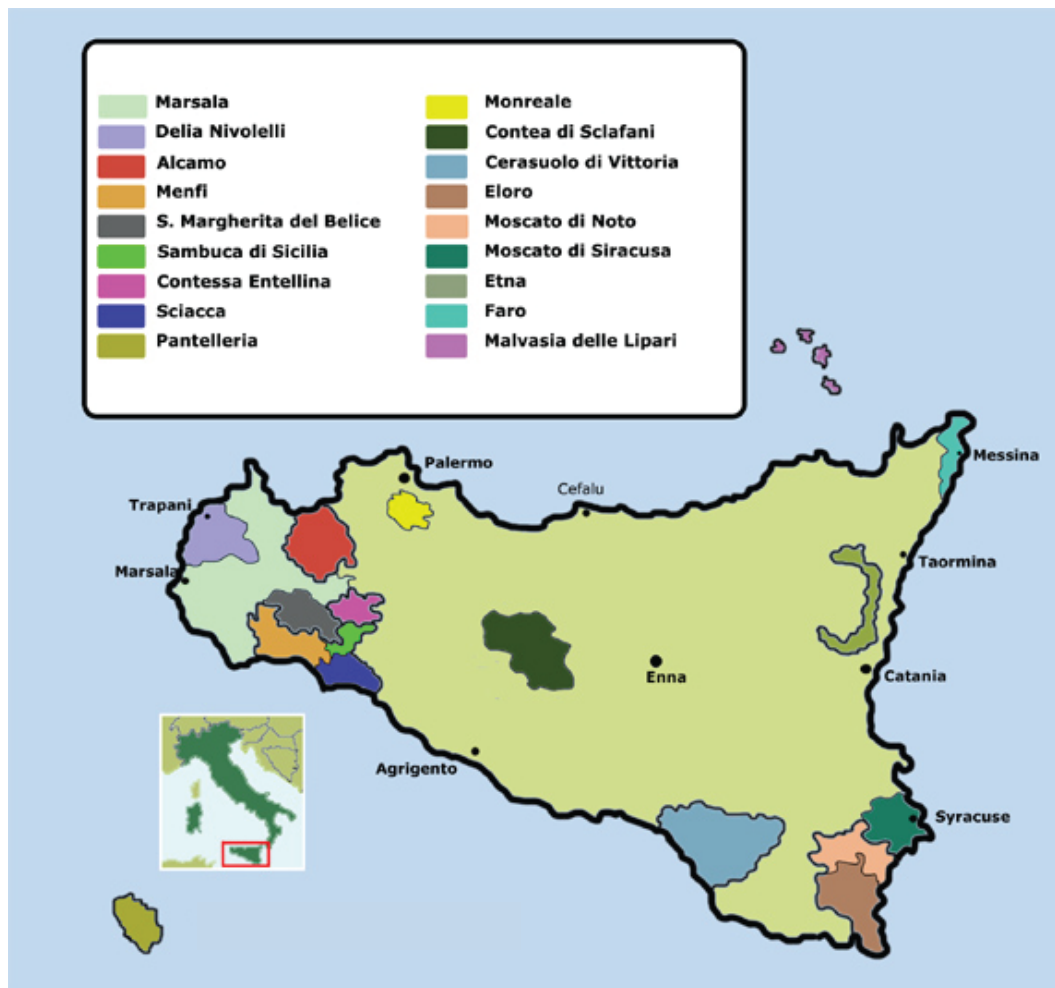
Marsala Fine- minimum 1 year aging

Marsala Superiore- minimum 2 years aging

Marsala Superiore Riserva- minimum 3 years aging

Marsala Vergine/Marsala Solera- minimum 5 years aging- cask solera system

Marsala Vergine Stravecchio Riserva- minimum 10 years aging- cask solera system



MALAGA

Continuing our tour of fortified wines, we return to Andalusia, Spain (home of Sherry) where Malaga is made. Malaga was incredibly popular in the 17th century, and by the mid-19th century, vine plantings here were so extensive as to be Spain's second largest wine region. Remember that Spain's La Mancha region is not only Spain's largest, but the largest region in all of Europe. The double defeat of powdery mildew and phylloxera devastated the region and it never quite recovered. There are now about 14 bodegas making Malaga today, where there were well over 100 at the height of its popularity.

Pedro Ximenez, Airen, and Moscatel de Alejandria are the grapes used to create Malaga wine. Grapes were dried on straw mats, which reduced the water content and concentrates the flavors. Malaga can still be made in this way. These wines are aged in a solera system within the city of Malaga. They can range from 15-23% ABV and can be finished either dry or sweet.

BEGINNER FORTIFIED WINE PRODUCTION

MONTILLA-MORILES

Montilla-Moriles is very similar to Sherry. It is also a region in Andalusia, Spain located just north of Malaga. It is made in Fino and Oloroso styles- the first with flor and the second without. Added complexity and integration of flavors that the solera system provides in Sherry is utilized here too. Fortification takes place after fermentation. The main point of differentiation is that Pedro Ximenez, Airen, and Moscatel Alejandria are the main varietals used in Montilla-Moriles production. Pedro Ximenez is the dominant grape planted here, and can reach 14-16% ABV without fortification.

VIN DOUX NATURELS

This is a broad term to describe a French wine whose fermentation is arrested by the addition of neutral grape spirit. Typically, they are made from the Muscat family of grapes or Grenache. This technique of arresting fermentation with neutral grape spirits to kill off the remaining yeasts that results in a wine with high alcohol and residual sugar may sound familiar. This is the same fortification process for Port, Madeira, Marsala, and Malaga. This process was originally mastered 400 years before Port was ever produced by Arnaldus Villanova in 1299 at Montpellier University's Medical School. The neutral spirit added to make VDN's is a higher percentage (95% ABV compared to Port's 77% ABV neutral spirit) but less is added and the resulting wine is around 15% ABV.

In the Languedoc, the VDN's made are Muscat de Frontignan, Muscat de Lunel, Muscat de Mireval, Muscat de St.-Jean-de-Minervois. In the Rousillon Muscat de Rivesaltes, which is Muscat based as the name suggests, and Grenache based VDN's Banyuls and Maury. Muscat de Beaumes de Venise and Grenache based Rasteau are the VDN's of the Rhone.



BEGINNER

HOW TO READ A WINE LABEL



Material contained in this document applies to multiple course levels. Reference your syllabus to determine specific areas of study.

Content contributed by Anne Drummond, Imperial Beverage

There are several elements contained within all wine labels. The following will showcase these items that are similar across all countries of origin, but will also point out differences.

OLD WORLD

Wines of the Old World, are often more challenging than New World (wines produced outside traditional wine growing areas of Europe, which includes Australia, Argentina, Canada, Chile, New Zealand, South Africa and the US) labels. With some European wines, the region or place of origin is key. For instance, wines of Chablis, Chianti, Rioja, are more important than the actual varietal. In other countries, such as Germany, the grape appears far more prominently, along with descriptive words regarding the sweetness or maturation level. New World labels are more consistent, though not identical. The emphasis is on the brand or producer and the grape variety or blend, not necessarily the region or appellation.

Regardless of the country of origin, one should always find:

- Country of origin

- Name and address of the producer or importer

- Package size (volume of wine contained within)

- Alcohol By Volume Percentage

- Vintage (year in which the grapes were harvested (Not the year bottled!))

- Grape Varietal or Style

VARIETALS OR STYLE NOTES

There are easily 5,000+ known varieties of grapes. Of these, 150 or so are planted commercially in amounts that are significant or notable. In the New World, wines are often bottled under the name of their primary grape. In the US, Argentina, Australia, Chile, New Zealand, and South Africa, many wines are known by a varietal name and sometimes by grape combinations such as Cabernet-Shiraz.

Proprietary names are often used for blends that do not contain the minimum percentage of a single variety. A relatively new phenomenon, this has developed as some wine producers have begun to create wines with unique names that are owned as a trademark of the brand. The "proprietary name" gives producers greater range and freedoms when blending. A proprietary name is normally found on only one brand. The only exception to this rule is "Meritage", which is owned by an association of wineries that has set rules for the grape variety composition and usage.

There are some notable elements when viewing Regions, Sub-Regions, or Appellations. Wine producing areas, known as regions, are largely distinguished by their geography. Further, these large areas are sub-divided, thus the "sub-region". Occasionally divided due to topography, usually these distinctions are relative to micro-climate or geography.

In the Old World, the finest wines are known first by their geographical growing region, known as an appellation. The world appellation refers to the place where the grapes are grown. Most appellations carry with them a governmental designation or distinction. This official status bestowed by either a governmental body or trade bureau, offers assurance to the consumer of both quality and authenticity. Systems for officially identifying and regulating wine growing regions are evolving in countries of the New World. In the US, American Viticultural Areas (AVA) are used to distinguish the growing region or sub-regions.

BEGINNER HOW TO READ A WINE LABEL

DESIGNATIONS AND THEIR IMPORTANCE

In the Old World, there are a number of distinctions that designate a wine's origin and quality. The following chart will assist:

Italy	DOCG	Denominazione di Origine Controllata e Garantita (guaranteed place name)
Italy	DOC	Denominazione di Origine Controllata (protected place name)
Italy	ITGT	Indicazione Geografica Tipica (Typical place name)
Italy	Vini di tavola	Table wines
France	AOC	Vins d'Appellation d'Origine Contrôlée (Appellation of controlled Origin)
France	VDQS	Vin Délégués de Qualité Supérieure (Wines of superior quality)
France	Vins de Pays	Country Wines
France	Vins de Table	Table Wines
France	Premier cru Classe	Status refers to a classification of wines primarily from the Bordeaux region
France	Premier cru Supérieur	Status refers to a classification of wines primarily from the Bordeaux region
France	Premier Grand Cru Classe	The highest category for French wines classified in the Appellation of Saint Emilion
Spain	DO	Denominación de Origen (Denomination of Origin)
Spain	DOC	Denominación de origen Calificada (Denomination of Qualified Origin)
Spain	Gran Reserva	Aged a minimum of 5 years
Spain	Reserva	Aged a minimum of 3 years
Spain	Crianza	Aged a minimum of 2 years
Portugal	DOC	Vinho de Qualidade (Quality wine produced in a geographically limited region subject to strict regulations)
Portugal	IPR or VQPRD	Indicação de Proveniência Regulamentada (Wines from newer regions that are candidates for DOC status. Although created in 1990 to designate wines of "intermediate" quality, this classification is not typically used anymore.)
Portugal	VR	Vinho Regional (Regional wines that do not adhere to the same strict regulations as IPR or DOCX classifies wines)
Portugal	CVR	Wines produced in a specific region from at least 85% of locally grown grapes

BEGINNER HOW TO READ A WINE LABEL

Portugal	Vinho de Mesa	Table wines
Portugal	VEQPRD	Sparkling Wine produced in a demarcated region
Germany	QMP	Qualitätswein mit Prädikat (Quality wine with special Attributes)
Germany	Kabinett	The first of the Prädikat wines in Germany, this is typically the lightest and most delicate style that an estate will produce
Germany	Spatlese	German for late harvested, Spatlese has more richness and body than Kabinett because the grapes are allowed to ripen for an extra week or more. Once harvested, the wine can be fermented fruity (Lieblich), half dry (Halbtrocken) or dry (Trocken) depending on the preferences of the winemaker.
Germany	Auslese	Grapes specifically selected during harvest, cluster by cluster. Often made in the fruity style with residual sweetness, considered the finest of achievements by winemakers.
Germany	Beerenauslese	A rare dessert wine made from extremely overripe grapes that are fully affected by botrytis mold. The grapes are selected one berry at a time.
Germany	Eiswein	Literally, ice wine. Made from overripe grapes that have frozen solid on the vine.
Germany	QBA	Qualitätswein Bestimmter Anbaugebiete (Quality Wine from Specific Appellations.)
Germany	Deutscher Landwein	Superior Table Wine
Germany	Deutscher Tafelwein	Superior Table Wine

OTHER TERMS THAT CAN BE FOUND ON A LABEL

Bottling and Winery Information terms can be cumbersome at least, and confusing at best. The following will outline the meanings of some of this additional detail.

Estate Bottled or Chateau Bottled

100% of the grapes used were grown in the winery's own vineyards or came from vineyards controlled by the winery in the same appellation. These wines must be vinified and bottled at the winery as well.

Grown, Produced, and Bottled By

Indicates that the grapes were grown at the winery's vineyards (or vineyards controlled by the winery) and that the wine was vinified and bottled at the winery.

Produced and Bottled By

The winery crushed, fermented and bottled at least 75% of the wine in that particular bottling, but not that the winery grew the grapes.

Made and Bottled By

A minimum 10% of the wine was fermented at the winery. The remaining 90% could be from other sources. This designation does not generally indicate the quality implied by the phrase "Produced and Bottled By".

Bottled By

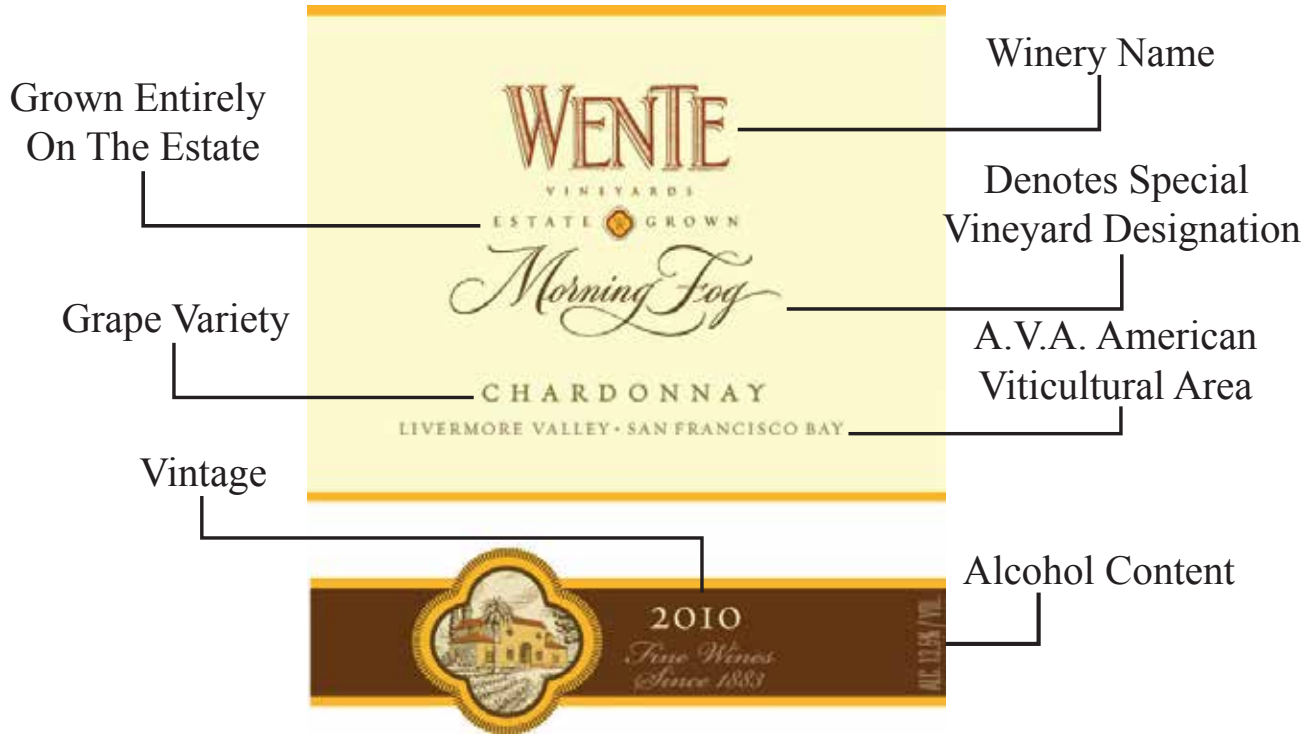
This alone on a label indicates that the only role the winery most likely played in the wine's production was to purchase and bottle wine made somewhere else.

READING THE LABEL'S CONTENTS

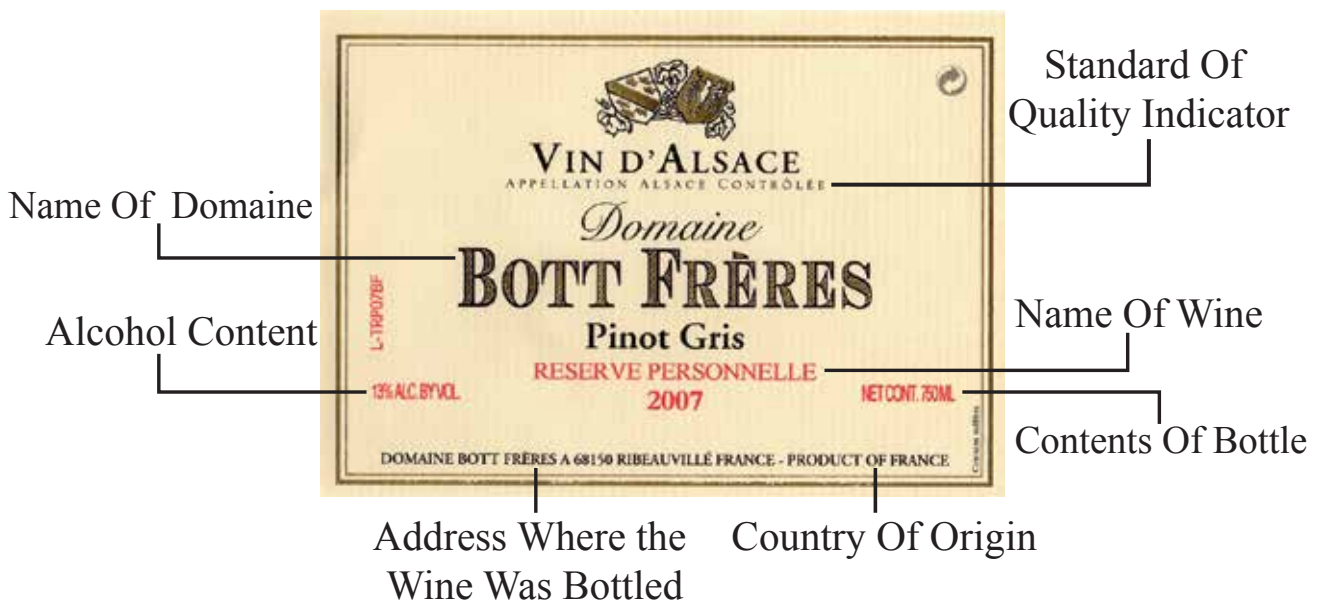
Now that you are aware of the contents of a label created in either Old or New World, the following examples should offer practical application. (See examples 1-4)

BEGINNER HOW TO READ A WINE LABEL

How to Read an American Wine Label

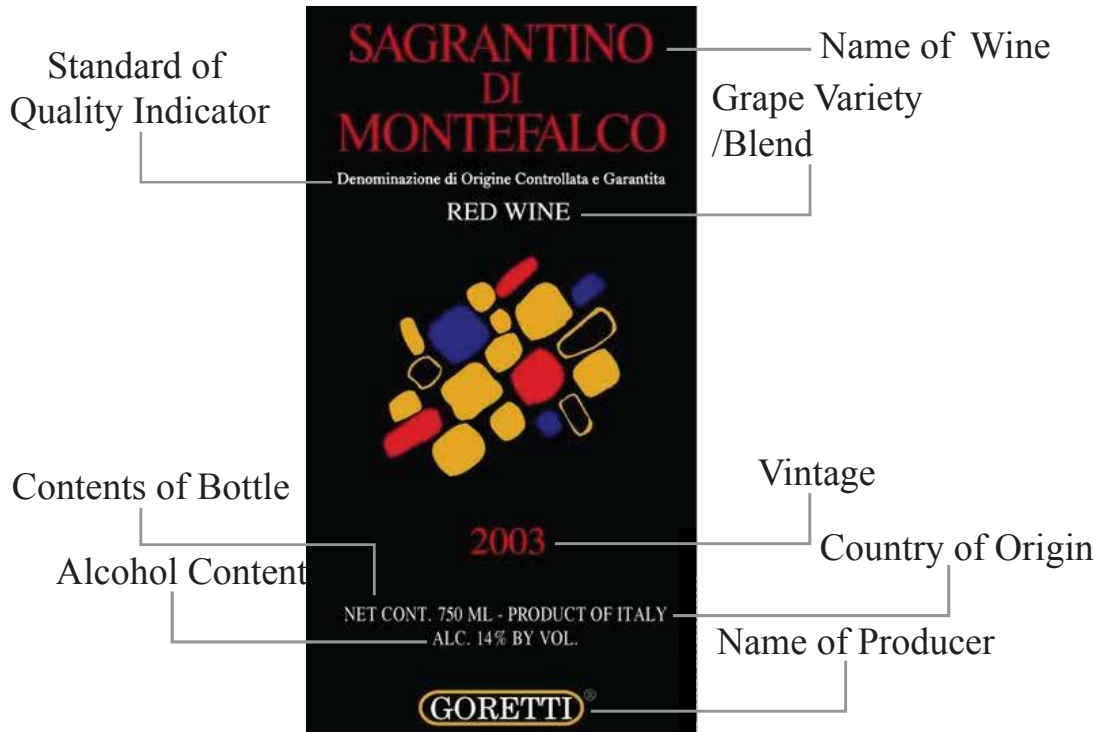


How to Read a French Wine Label

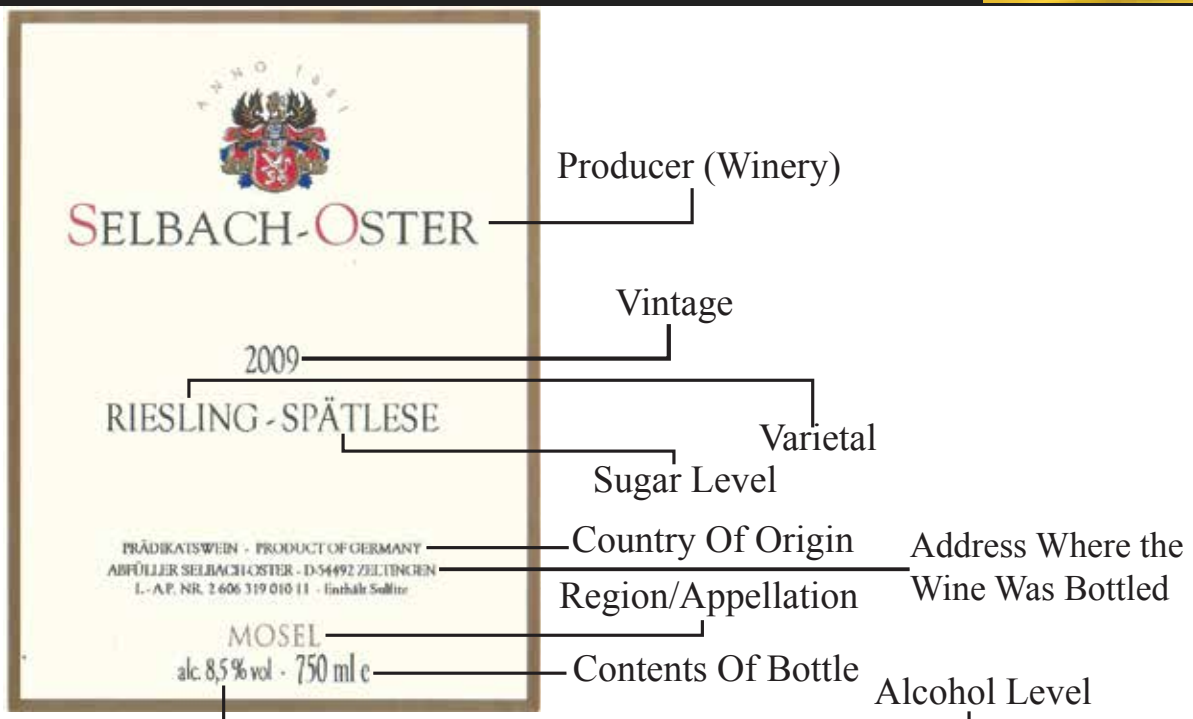


BEGINNER HOW TO READ A WINE LABEL

How to Read an Italian Wine Label



How to Read a German Wine Label





BEGINNER

MICHIGAN WINES

Content contributed by Jenny Parker, Imperial Beverage

Each year, Michigan's wine, grapes, and grape juice products and related industries ...

- produce nearly \$790 million of total economic value to the State of Michigan
- pay more than \$42 million in state and local taxes in Michigan, and an additional \$42 million in federal taxes
- account for more than 5,000 jobs across the state, for a payroll of more than \$190 million

Michigan has a unique and diversified agriculture – second only to California. Michigan ranks 4th among states for grape production and ranks 13th among states for wine production. With a long history of quality fruit production and the influence of the Great Lakes, Michigan has over 90 wineries. Michigan wine growers claim over 50 wine grape varieties planted in the state. Their styles vary from fruit-forward wines to bone dry wines and fortified wines to late harvest and ice wines.

“ **"Lake effect" protects the vines with snow in winter, retards bud break in spring helping avoid frost damage, and extends the growing season by up to four weeks.** ”

The overall wine quality is good/excellent and improving. Currently there are over 2,000 acres of wine grapes, with Riesling being the leading white and Pinot Noir being the leading red grape varieties planted. Four wine trails also dot the state leading to increased tourism and consumer awareness of this great Michigan treasure.

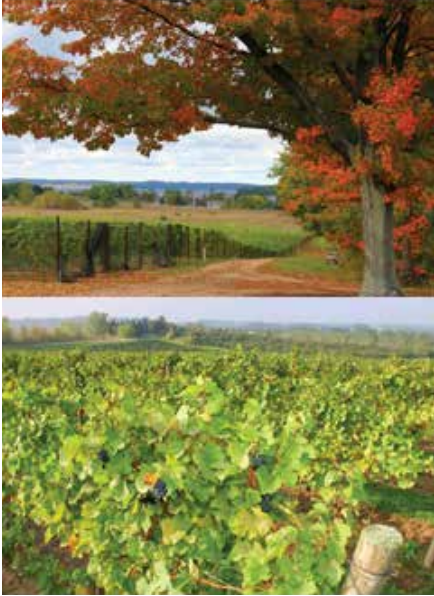
Growing popularity of Michigan wine is leading to the number of wineries increasing. Acreage is increasing, quality is increasing and industry members are working together – creating wine trails, raising funds to supplement state funding, expanding research and educational programs – both informal professional development and programs leading to accreditation are growing at a high rate.

Michigan has four AVA's (Accredited Viticultural Areas). In the northwest part of the state, near Traverse City, is the Leelanau Peninsula and the Old Mission Peninsula. This area grows 51% of Michigan's wine grapes. In the southwest part of the state is the Lake Michigan Shore and Fennville appellations, where 45% of Michigan's wine grapes are grown.



BEGINNER MICHIGAN WINES

“ In the northwest part of the state, near Traverse City, is the Leelanau Peninsula and the Old Mission Peninsula. This area grows 51% of Michigan's wine grapes. In the southwest part of the Lake Michigan Shore and Fennville appellations, where 45% of Michigan's wine grapes are grown. ”



The western shore of Michigan's lower peninsula has been the primary region of commercial wine grape production in the state. Harvest starts around the state (for early hybrid varieties) at the end of August and in the southwest it may extend into November for late-ripening parcels. Most of Michigan's quality wine grapes grow within 25 miles of Lake Michigan. Here, the "lake effect" protects the vines with snow in winter, retards bud break in spring helping avoid frost damage, and extends the growing season by up to four weeks.



BEGINNER SAKE

Content contributed by Anne Drummond & Jenny Parker, Imperial Beverage

We all have favorites. A rich, luscious, buttery Chardonnay on a hot, hot summer day, served outdoors under an ancient shade tree. A stinky, spicy, tongue drying Cabernet served with our favorite carnivorous treat. But Sake?

In the aftermath of the earthquake and tsunami in March 2011, not to mention a crisis of nuclear proportion, Japan's Sake industry has taken a blow. With power outages rampant and little promise of revival imminent, many breweries are fearing the worst. Wine & Spirits (June, 2011) reports that from Tokyo to the west, however, breweries are operational, and exports will not cease to exist. (Kudos to W&S for ending the article thus: "...it might be a good time to familiarize yourself with a map of Japan.")

ABOUT SAKE

Just as grape varietals impact the development of a wine, excellent Sake requires the finest rices. This grain contains a high starch content in its core, allowing the integrity of the rice to remain as long as possible through the brewing process. Called "Shinpaku-mai" in Japanese, the flavor profile of Sake depends on achieving balance between sweet and acid. This balance is trusted to skilled artisans that have understanding of climate, rice, water, technology, and the subtleties required in the touch of a brewing batch.

WHAT TO LOOK FOR IN A SAKE

FRAGRANCE

Whether a rich, rice scent, without distracting floral essence, or a perfumy sampling, fragrance is the first stop on the tasting spectrum, providing insight into the contents of your glass.

IMPACT

Is the Sake quiet on the palate, or explosive in the mouth? How does the liquid "behave" on the tongue? Just as an acidic Sauvignon Blanc makes the mouth water, and a Tannat might cause you to pucker from the dry experience, so will each Sake have a behavior worth noting.

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SWEET OR DRY

Dimension of sweetness is often the most perceptible, yet most difficult to convey. The gravity of a Sake, which references the density of the Sake to the density of water, offers some suggestion to the viscosity and the sweetness. Regardless, the taster walks the subjective line of sweet to dry when tasting.

ACIDITY

Refreshingly simple, acidity is expressed on the tongue in Sake just as it would in high citric foods, offering a cutting through the oily measures of paired fishes, sauces or cheese.

PRESENCE

The wine analog here would be body, or the mouth feel and richness of the Sake. Light and delicate to rich and viscous; how does the Sake feel on the mouth? Does it have some weight, or is it light and airy? Great sakes are made that fit both descriptions.

EARTHINESS

A odd descriptor, perhaps, but many Sakes will provide a note of rusticity, with notes of mushroom or wet earth. This will add to the complexity or depth of the Sake, and is more common in Sake from the southern kuras. Aged Sake will also often feature this flavor note.

TAIL

The finish, the length, the persistence of the Sake. How long does it hang around? A well made Sake can have a surprisingly long tail, with a variety of changing flavors as it goes. Depending on mood or food, you may opt for something clean and bright, with a very short, brisk tail, or a Sake with something to savor after the last swallow.

“ Just as an acidic Sauvignon Blanc makes the mouth water, and a Tannat might cause you to pucker from the dry experience, so will each Sake have a behavior worth noting.

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HOW SAKE IS MADE

Sake is usually referred to in English-speaking countries as rice wine; however, this term is a misnomer. Unlike wine, in which alcohol is produced by fermenting sugar that is naturally present in grapes, sake is produced by means of a brewing process more like that of beer. Thus, sake is technically "rice beer" rather than "rice wine".

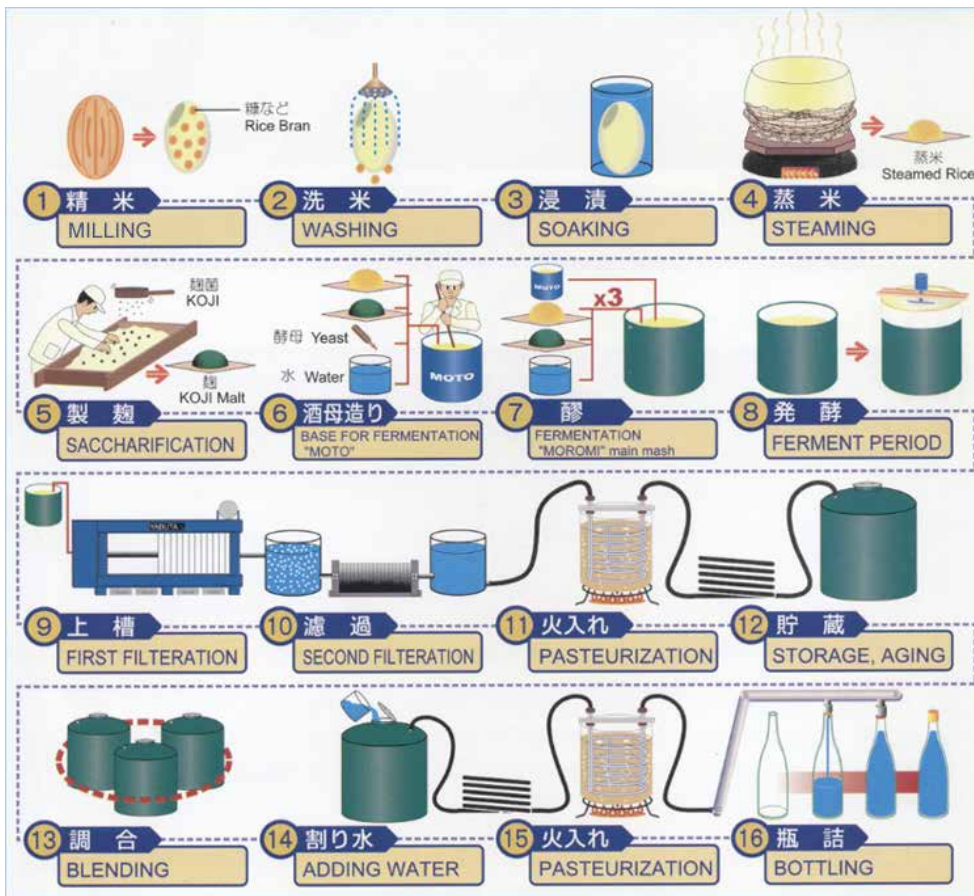
To make beer or sake, the sugar needed to produce alcohol must first be converted from starch.

The brewing process for sake differs from the process for beer, in that for beer, the conversion from starch to sugar and from sugar to alcohol occurs in two distinct steps. But when sake is brewed, these conversions occur simultaneously. Furthermore, the alcohol content differs between sake, wine, and beer. Wine generally contains 9%–16% ABV,[1] while most beer contains 3%–9%, and undiluted sake contains

18%–20% (although this is often lowered to about 15% by diluting it with water prior to bottling). There are two basic types of sake: Futsū-shu (ordinary sake) and Tokutei meishō-shu (special-designation sake). Futsū-shu is the equivalent of table wine and accounts for the majority of sake produced. Tokutei meishō-shu refers to premium sakes distinguished by the degree to which the rice has been polished and the added percentage of brewer's alcohol or the absence of such additives.

PRODUCTION

The rice used for brewing sake is called shuzō kōtekimai (sake rice). The grain is larger, stronger, and contains less protein and lipid than the ordinary rice eaten by the Japanese. The rice has a starch component called shinpaku in the center of the grains. Since sake made from rice containing only starch has a superior taste, the rice is polished to remove the bran. If a grain is small or weak, it will break in the process of polishing. This rice is used only for making sake, because it is unpalatable for eating. There are at least 80 types of sake rice in Japan. Among these, Yamadanishiki, Gohyakumangoku, Miyamanishiki and Omachi rice are very popular.



“ To make beer or sake, the sugar needed to produce alcohol must first be converted from starch. ”

WATER

Water is one of the important ingredients for making sake. Rigid restrictions are observed for the concentrations of certain chemical substances that can affect the taste and quality of sake. The water used is almost always groundwater or well water. Urban breweries usually import water from other areas, because of the difficulty of getting water of sufficient quality locally.

BREWING MOROMI, THE MAIN MASH

Sake is produced by the multiple parallel fermentation of rice. The rice is first polished to remove the protein and oils from the exterior of the rice grains, leaving behind starch. Thorough milling leads to fewer congeners and generally a more desirable product.

Newly polished rice is allowed to "rest" until it has absorbed enough moisture from the air so that it will not crack when immersed in water. After this resting period, the rice is washed clean of the rice powder produced during milling and then steeped in water. The length of time depends on the degree to which the rice was polished, ranging from several hours or even overnight for an ordinary milling to just minutes for highly polished rice.

BEGINNER SAKE

After soaking, the rice is steamed on a conveyor belt. The degree of cooking must be carefully controlled; overcooked rice will ferment too quickly for flavors to develop well and undercooked rice will only ferment on the outside. The steamed rice is then cooled and divided into portions for different uses.

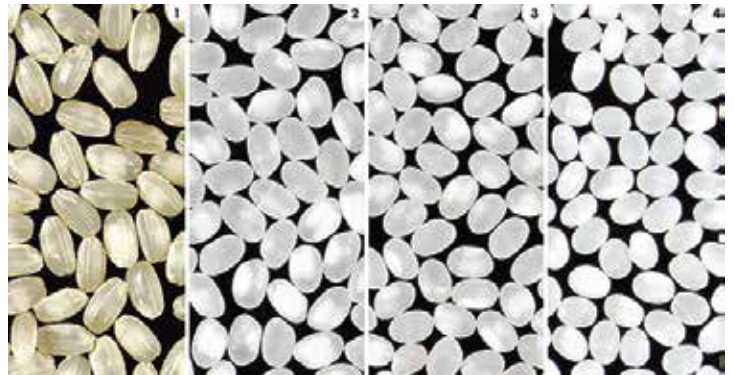
The microorganism *Aspergillus oryzae* is sprinkled onto the steamed rice and allowed to ferment for 5-7 days (Uno et al., 2009). After this initial fermentation period, water and the yeast culture *Saccharomyces cerevisiae* are added to the koji (rice and mold mixture) and allowed to incubate at four degrees Celsius for about seven days (Uno et al., 2009). Over the next four days, pre-incubated mixture of steamed rice (90 kg), fermented rice (90 kg) and water (440L) are added to the fermented mixture in three series (Uno et al., 2009).

This staggered approach allows time for the yeast to keep up with the increased volume. The mixture is now known as the main mash, or moromi.

The main mash then ferments, at approximately 15-20 degrees Celsius for 2-3 weeks. With high-grade sake, fermentation is deliberately slowed by lowering the temperature to 10°C (50°F) or less. Unlike malt for beer, rice for sake does not contain the amylase necessary for converting starch to sugar and so it must undergo a process of multiple fermentation. The addition of *A. oryzae* provides the necessary amylases, glucoamylases, and proteases to hydrolyze the nutrients of the rice to support the growth of the yeast (*S. cerevisiae*) (Uno et al., 2009). In sake production these two processes take place at the same time rather than in separate steps, so sake is said to be made by multiple parallel fermentation.

After fermentation, sake is extracted from the solid mixtures through a filtration process. For some types of sake, a small amount of distilled alcohol, called brewer's alcohol, is added before pressing in order to extract flavors and aromas that would otherwise remain behind in the solids. In cheap sake, a large amount of brewer's alcohol might be added to increase the volume of sake produced. Next, the remaining lees (a fine sediment) are removed, and the sake is carbon filtered and pasteurized. The sake is allowed to rest and mature and then usually diluted with water to lower the alcohol content from around 20% to 15% or so, before finally being bottled.

“ The grain is larger, stronger, and contains less protein and lipid than the ordinary rice eaten by the Japanese. ”



MATURING

The process during which the sake grows into a quality product during storage is called maturing.

Mature sake has reached its ideal point of growth. New sake is not liked because of its rough taste, whereas mature sake is mild, smooth and rich. However, if it is too mature, it also develops a rough taste. Nine to twelve months are required for sake to mature.

Aging is caused by physical and chemical factors such as oxygen supply, the broad application of external heat, nitrogen oxides, aldehydes and amino acids, among other unknown factors. It is said that *Saussureae radix* from the Japan cedar material of a barrel containing maturing sake comes to be valued, so the barrel is considered indispensable.

“ The process during which the sake grows into a quality product during storage is called maturing. ”

TŌJI

Tōji is the job title of the sake brewer. It is a highly respected job in the Japanese society, with tōji being regarded like musicians or painters. The title of tōji was historically passed on from father to son; today new tōji are either veteran brewery workers or are trained at universities. While modern breweries with refrigeration and cooling tanks operate year-round, most old-fashioned sake breweries are seasonal, operating only in the cool winter months. During the summer and fall most tōji work elsewhere, and are commonly found on farms, only periodically returning to the brewery to supervise storage conditions or bottling operations.

In Japan sake is served chilled, at room temperature, or heated, depending on the preference of the drinker, the quality of the sake, and the season. Typically, hot sake is a winter drink, and high-grade sake is not drunk hot, because the flavors and aromas will be lost. This masking of flavor is the reason that low-quality and old sake is often served hot.

Sake is usually drunk from small cups called choko, and poured into the choko from ceramic flasks called tokkuri. Saucer-like cups called sakazuki are also used, most commonly at weddings and other ceremonial occasions. Recently, footed glasses made specifically for premium sake have also come into use.

“ Tōji is the job title of the sake brewer. It is a highly respected job in the Japanese society, with tōji being regarded like musicians or painters. ”

Another traditional cup is the masu, a box usually made of hinoki or sugi, which was originally used for measuring rice. In some Japanese restaurants, as a show of generosity, the server may put a glass inside the masu or put the masu on a saucer and pour until sake overflows and fills both containers.

Aside from being served straight, sake can be used as a mixer for cocktails, such as tamagozake, saketinis, nogasake, or the sake bomb.

TYPES OF SAKE

HONJOZO

These are Sakes to which a small amount of distilled alcohol has been added. This is the most common type of Sake, but don't be fooled into thinking that Honjozos are all of lower quality. While it's true that most poor Sakes are made this way, the simple addition of alcohol can often bring out wonderful aromas and flavors. Some of the worst Sakes are Honjozos, but so are some of the very best values. Generally lighter, and frequently very fragrant.



JUNMAI

These are pure Sakes, nothing but rice, water, yeast, and the Koji mold that makes everything possible. Generally heavier and with more mouth weight than Honjozo, any Ginjo and Daiginjo Sakes are Junmai.

GINJO

Ginjo Sakes are sakes that use rice with at least 40% of the kernel ground away before the brewing process begins. This removes much of the starchy outer shell, which adds little to the clarity and brightness of the Sake and can interfere with the purity of the finished product. Obviously this is very costly, is done in a very limited number of Sakes, and currently represents about 6% of all Sakes in the market.

“ **JUNMAI** - These are pure Sakes, nothing but rice, water, yeast, and the Koji mold that makes everything possible. Generally heavier and with more mouth weight than Honjozo, any Ginjo and Daiginjo Sakes are Junmai. ”

DAIGINJO

This level goes even further, with at least a full half of the rice kernel ground away. Very few Sakes carry this designation, and they are worth seeking out. Ginjo and Daiginjo Sakes are the apex of Sake making. These are generally light, delicate and beautiful, with intricate flavors and great balance.



BEGINNER WINE SERVICE



Material contained in this document applies to multiple course levels. Reference your syllabus to determine specific areas of study.

Content contributed by Anne Drummond, Imperial Beverage

As a server or bartender, proper wine service is a skill you'll not do well without. From order to presentation and follow up, there are particular steps that are important in the formal service of wine.

First, all bottled wines should be presented using these steps, regardless of the cost or perceived wine knowledge of the guest in your establishment. All bottled wines being delivered to the table should be treated with the respect due the wine maker, establishment, and of course, the person ordering the selection.

TAKING THE ORDER

While you may not know every detail or idiosyncrasy of a particular wine, it is important that you have a general understanding of the categories on your establishment's list. Even if you are not a wine drinker or haven't tasted much of the list, have a working knowledge of the categories of wines on the list, and have a "favorite" in each. This favorite should be something that is proven and well-received at the location, and should be in the mid-range price level. Any guest can see through a server that recommends only the most expensive bottle in the category. Additionally, have a by-the-glass or bottle recommendation ready when a guest orders a signature dish. Appearing knowledgeable is key.

When a glass or bottle of wine is ordered, repeat the order back to the guest. Be clear and succinct. Be sure that you understand the varietal, brand, and vintage desired.

PRESENTING THE BOTTLE

Assuming that appropriate, polished glassware is already at the table, approach the host with the bottle of wine he or she ordered. Treat the bottle gently, as though it were special and delicate. Tip the bottle's top back, toward your body, with the body of the bottle cradled in your arm, label side facing the host. "Present" the bottle to him or her by standing at his or her right side and restate the name of the wine including the varietal, brand, and vintage. (All beverage service occurs from the right of the guest, with your right hand, unlike food service, which is from the left with the left hand). The host will nod or gesture that the wine is what was expected. This is your cue to begin opening.

OPENING THE BOTTLE

Keeping the label facing the host as much as possible, take out your arm or service linen and place over your minor arm, holding the bottle in that same hand. With your other hand, use the wine tool to cut away the foil from the top of the bottle. The foil should be placed in your pocket or apron, not on the table. Once cut away, use your service linen to wipe the mouth of the bottle, removing any dust and debris, and generally cleaning the mouth of the bottle before the cork is removed.

Using your wine key, remove the cork from the bottle. Remember, it is not about strength, but rather leverage that allows the cork's removal. If you have difficulty tableside, practice on by the glass poured wine bottles at the bar, the next shift you work. The bartender will surely allow you to help, offering additional practice.

Once the cork is removed, it is placed to the right of the host's place setting. He or she may choose to smell, keep, or leave the cork altogether.

BEGINNER WINE SERVICE

POURING THE WINE

Begin the wine's dispersement with the host. Pour roughly one ounce into the host's glass. Step back, away from the table, and allow the host to swirl, smell, taste, and nod. If the wine is flawed, the host will stop the service and the bottle should be replaced immediately, and the steps of service repeated. If the host is pleased with the selection, he or she will indicate with a nod, gesture, or verbal announcement, indicating that you may pour for his or her guests.

Pour for each guest in turn, from the right side with the right hand, beginning with the ladies and then the men, moving clockwise around the table. The host's glass is the last to be filled, regardless of the host's gender.

When pouring white wines, please fill the glass to just above half full. For all reds, just below half. In the event that a second bottle of different varietal, brand or vintage is ordered, deliver new glasses as well.

DECANTING THE WINE

Your restaurant or bar location should have a policy related to decanting wines. This policy will indicate which wines the proprietor wishes to decant tableside. Typically, rich or robust wines known for sediment are on this list, among a few others that are hand selected for this process. Be familiar with this policy, and use it whenever possible. If there is ever a question of whether or not to decant a wine, err on the side of the affirmative.

Decanters offer a chance for wines to "breathe" and oxygenate at a faster pace than in the bottle, thus hyper-maturing the wine and readying it for drinking. Additionally, slow and careful decanting allows wine to separate from its sediment, which, if left mixed in with the wine, will impart a very noticeable bitter, astringent flavor. Just like bottle service, formal presentation is always a must when using a decanter. Decanting a wine isn't the mere act of shifting the liquid from one vessel to another.

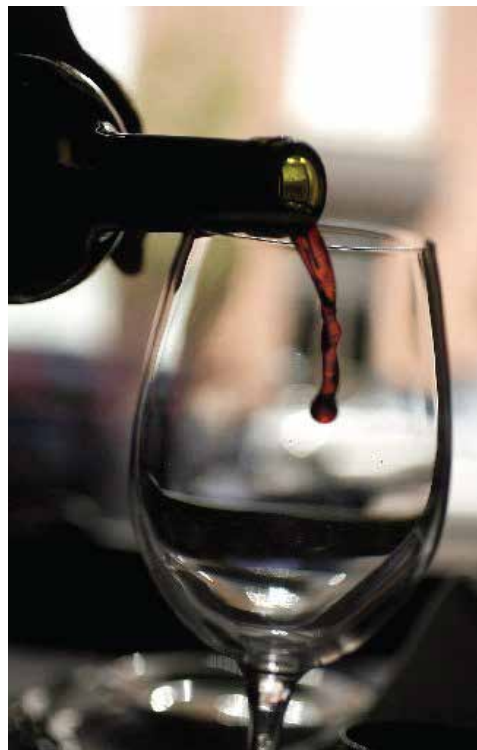
Decanting a young wine is easy. With little or no sediment, you may simply pour the wine into the decanter. Let it sit for about twenty minutes before serving, and the guest will notice a dramatic increase in subtlety and complexity of the wine. It will keep evolving and improving over the course of several hours.

Decanting older wines with sediment requires finesse. Because the wine is older, it has aged a great deal on its own, so doesn't need the artificial boost. You may even overexpose the wine to oxygen before serving, so older wines should be decanted immediately before serving.

First, gather your tools. You will need a light source, often a short candle, the bottle of wine, and a cradle or basket. Lay the bottle, label side up. In the cradle, and follow appropriate steps to open the bottle without removing it from the cradle. With long necked bottles, this is quite simple, though deceiving. As long as the bottle's mouth remains above the level of liquid, a spill won't occur. Next, after cleaning the bottle's neck with your service linen. Begin rotating the cradle slowly to pour the wine into the decanter. Position the bottle so that the light source can be seen through the neck of the bottle, and you can slow or stop pouring as sediment enters the neck.

The wine you've just decanted should be clean and relatively clear, with a beautiful bouquet and no remaining sediment.

Occasionally, you'll come across a young wine with sediment (well-made, California Zinfandels, for example, often exhibit this trait). If this happens, follow the procedures for decanting older wines, but also allow extra time for the wine to breathe and develop.



BEGINNER WINE SERVICE

OPENING SPARKLING WINES

Sparkling wines follow all the bottle service instructions. However, the physicality of opening a bottle of sparkling wine or Champagne is somewhat different. Contrary to popular belief, the “POP” of the cork is not the ultimate achievement. A novice measures the skill with the sound. A veteran server or Champagne aficionado always prefers the sweet sound of air slowly escaping the bottle. Just as with a perfect swan dive, the less vulgar splash or noise achieved, the better.

First, remove the foil and discard into your pocket or apron. Loosen the wire cage. Flipping down the small wire ‘key’ that is pressed against the neck of the bottle, turn it until the cage is loosened. Remove and discard the cage. Drape your service linen over the cork. Hold the cork steady through the linen, and twist the bottom—the bottle—until the cork eases out. Keeping the bottle pointed in a safe direction (away from yourself and others), grip the wine bottle and ease the twisting until the cork “pops”. To avoid foamy overflow, pour only about an inch of wine into each flute glass first, wait a few seconds, then continue the pour.

TEMPERATURE

Serving wines at the following temperatures will maximize bouquet and flavor, and enhance the wine experience for the guest.

Champagne, sparkling, or dessert wine	40 degrees F
Sauvignon Blanc, Pinot Grigio, etc.	45-48 degrees F
Chardonnay, Chablis	48-52 degrees F
Pinot Noir	60-64 degrees F
Cabernet Sauvignon, Merlot, Shiraz	64-66 degrees F

Though wine storage temperatures (53-57 degrees Fahrenheit) are important, it’s just as important to take note of the temperature at which you enjoy your wine, its service temperature. White wines should be chilled before drinking while red wines should be allowed to come up in temperature. Ideally, whites should be between refrigerator temperature (40 degrees F) and storage temperature, and reds should be somewhere between storage and room temperature.

Sizes of Wine Bottles-

Wines come in three main serving sizes, 750ml, 375ml (split) and 187ml (single serving).

Milliliters	Ounces	Number of Glasses
750ml	25.4	4
375ml	12.7	2
187ml	6.33	1

GLASSWARE

Does the glass make a difference? You bet it does.

A wine glass may seem like just another drinking glass to some, but to others, it can make all the difference. The shape of the glass affects the bouquet, color of the liquid, temperature, and even effervescence. The glass also positions body parts, such as the fingers and tongue in correct spots to best enjoy the particular varietal. According to Wine Cellar Secrets, wine glass maker Riedel has more than 20 types of wine glasses to cover all possible varieties of the beverage.

Three main types of wine glasses exist. The best are roughly 8-10 inches tall and are made of thin glass. A red wine glass features a spherical shape, intended to allow a swirling motion to best aerate for the particular varietal. White wine glasses may be more narrow, but most importantly offer a shallower base. Champagne flutes are narrow and straight, serving to direct the bubbles upward in a visually appealing manner, as well as keep more carbon dioxide in the product to deter flattening.

Riedel Glassware offers the following interactive sight (www.wineglassguide.com), where the most conducive glassware can be viewed by varietal selection. But overall, the following are the best glasses for the largest contingent of grapes.



BEGINNER SPARKLING WINE PRODUCTION

Content contributed by Kimberly Bricker, Imperial Beverage

“Come quickly, I am drinking the stars.”
—Dom Perignon

This quote is often attributed to Dom Perignon, a Cistercian monk, upon drinking champagne for the first time. This is a lovely quote and story indeed, even if a bit romanticized. Dom Perignon was constantly annoyed with the bubbles (refermentation) in Champagne and tried desperately to keep the bubbles out! He finally succumbed to the inevitable sparkle and remains an iconic founding father of Champagne. Not only did he reluctantly witness the creation of Champagne- but he invented a coquard press to turn grapes into a clear liquid, studied and understood the importance of blending different grapes and vineyards, utilized strong English glass bottles, and reintroduced the cork. While the first two contributions make Champagne better, it simply could not exist without the last two mechanisms.

Wines from the cold climate region of Champagne always had a slight sparkle to them. Waiting for the grapes to ripen on the vine until late fall, they would begin to ferment only to be halted by winter's cold temperatures. The wines were contained, and once they warmed up in spring, fermentation would resume. The carbon gas produced by the fermentation process had nowhere to go so it integrated into the wine causing a bubbly carbonation.

So let's make some Champagne!

We have to start with some still wine that is preferably high in acid and low in sugars. With two fermentations required, the first fermentation should result in a low-alcohol wine. A gentle pressing with a horizontal basket or bladder press should be used. In the Champagne region of France the grapes used are Chardonnay, Pinot Noir, and Pinot Meunier.

The juice is extracted in phases:

1st is Cuvee which is high in sugars and acids and is derived from the central pulp.

2nd is Taille which is richer in minerals and lower in both acids and sugars. It is derived from the flesh nearer to the skins and pips.

3rd is Rebeche which is too coarse for Champagne production and used to make spirits instead.

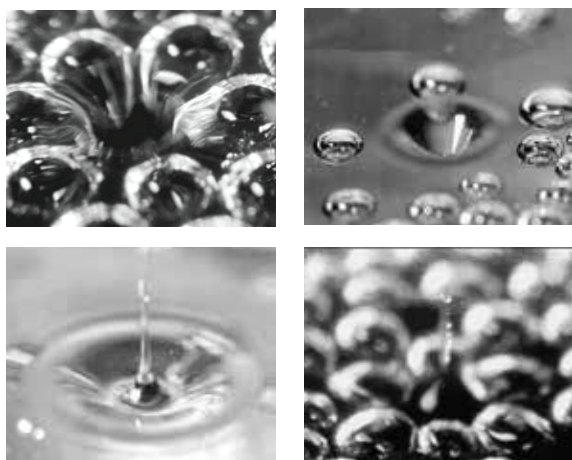
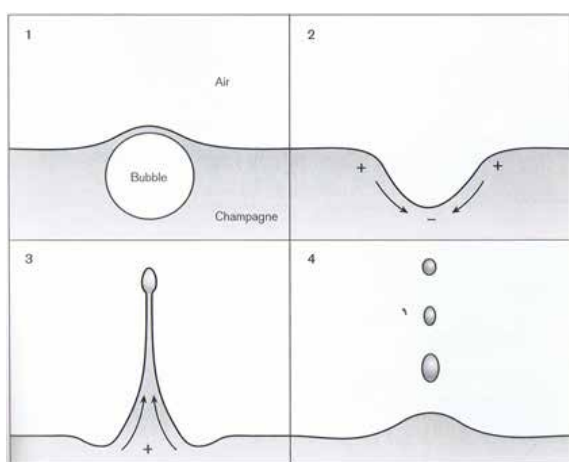
Then the juice is set (Debourbage). The solid particle sink, and are separated from the now clear juice. A warm fermentation begins at 60-70F (10-16C) and lasts for a week to 10 days. Malolactic fermentation can take place too. The resulting base wine should be 10-11% abv and can be chaptalized (sugar added for the purpose of increasing the resulting alcohol level rather than to sweeten a wine) if need be. Next the wine is raked (Soutirage), which removes the solid matter and clarifies the wine again. Now the blending begins. Most Champagnes are a blend of different grapes and vineyards and the results of which are greater than the sum of its parts.

Then it is fined, raked, and Cold Stabilized to clean clarify, and let the tartaric acid precipitate out. Next we make bubbles!



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The prise de mousse, or setting the foam, is the 2nd fermentation that results in a carbonated wine. This is a longer and cooler fermentation (60-63F/10-12C) that lasts for 28-56 days. The process creates 4.9-6 atmospheres of pressure and about 1.5% more alcohol by volume (abv). The base wines are bottled, both yeasts and sugars (liquer de tirage) are added to the bottle, and then it is capped tightly. This, the liquer de tirage, is the fuel for the second fermentation. Bottles are then placed in a pupitre and stored at 12C/54F for the length of the second fermentation. A Pupitre is a framed structure with holes for bottles slanted down at a 45 degree angle and is a home for champagne-to-be bottles during their evolution. The bottles are frequently and abruptly turned- shaking the sediment and moving it slowly down to the neck of the bottle from a horizontal to vertical position. During this 4-8 week process, the wines are aged on the lees (sur lees). (Lees are dead yeast cells which give champagne its breadly doughy aromas and flavors.) These days a gyropallatte is used in place of the old fashioned and less efficient pupitre.



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So now the wine was made and turned into Champagne- but there is a big chunk of lees/sediment in the upside down bottle. To remove this it's time for the degorgement process. The bottle is inverted and placed in a cold liquid to chill it to 45F/7C. This reduces the pressure and freezes the sediment/lees. The bottle is turned right side up, the top removed, and the frozen puck of sediments shoots out. Then the Dosage (liquer d'expédition) is added- which is a wine and sugar mixture. The wine replaces what was lost during disgorgement and the sugar addition determines the final sugar level of the Champagne.

Brut Nature	Bone Dry	No Sugar Added
Extra Brut	Extremely Dry	Less than .6% RS
Brut	Dry	Less than 1.5% RS
*Extra Dry/Extra Sec	Off Dry	1.2-2.0% RS
Sec	Slightly Sweet	1.7-3.5% RS
Demi-Sec	Sweet	3.5-5% RS
Doux	Very Sweet	More than 5% RS

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For non vintage Champagne, this wine is aged for 15 months; and for Vintage Champagne, it ages 36 months.

This is the classic Champagne method known as Methode Champenoise. As its name suggests, this is the technique used to create Champagne, as well as Franciacorta in Lombardy Italy. A sparkling wine made in this method outside of the appellation boundaries of the Champagne region is called Cremant. Cava from Penedes, Spain is made in this method too- but the grapes used in the base blend are Parellada, Macabeo, and Xarel-lo.

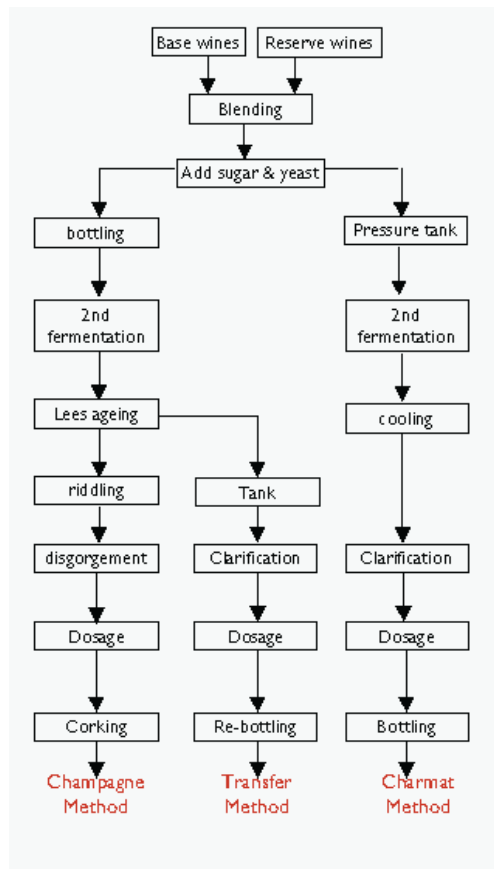
There are other methods to produce sparkling wine:

Transvasage, or Transfer method, is used in sparkling wine production for small and large bottle sizes. The wine has its secondary fermentation in the bottle, is poured into a large vessel, and re-poured into the chosen bottle sizes. This can be done for splits (187ml), and above 3L only (375ml, 750ml, 1.5ml must all have second fermentation in the bottle, riddled, disgorged, and liquor de triage added.

In the Tank, Cuve Close, or Charmat method both the first and second fermentation take place in a closed tank. This process simulates what happens in an individual bottle on a much larger scale. While much less labor intensive and less expensive the Tank method produces sparkling wine of much less finesse than the traditional Methode Champenoise. Prosecco is made by this fermentation process from Glera (aka Prosecco) grapes from Veneto, Italy. German Sekt is made in this way too.

The most cost effective technique to make a sparkling wine is carbonation. Yes, the same thing they do to make Coca-Cola bubble can be done to wine. Carbon Dioxide is injected into the base wine and incorporated as large clumsy bubbles.

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BEGINNER PROHIBITION

Content contributed by Anne Drummond, Imperial Beverage

The prohibition of alcohol, in most circles offered the simple moniker “prohibition”, is the legal act of prohibiting the manufacture, transportation, distribution and sale of alcoholic beverages. In most cases, the term refers to periods in the histories of countries during which the prohibition of alcohol was enforced.

HISTORY

Several incidents of prohibition have occurred worldwide. These included Prince Edward Island (Canada), Faroe Islands (Denmark), Russia and Soviet Union, Iceland, Norway, Hungary and Finland. In the United States, prohibition was enforced from 1920 to 1933.

After several years in the United States, prohibition became a general failure, as bootlegging became widespread and organized crime took control of the distribution of alcohol. Distilleries and breweries in Canada, Mexico, and the Caribbean flourished as their products were either consumed by visiting Americans or illegally exported to the US. Chicago became notorious as a haven for prohibition dodgers during the 1920’s.

After the American Revolution, drinking was on the rise and the government was at a loss to stop outlawed behaviors resulting from overconsumption. Additionally, the Temperance movement, which blamed alcohol for the ills of society, offered a zealous attack on alcohol as the scapegoat. Saloons, a social haven for men who lived in the still untamed West, were viewed by many, especially women, as debaucherous.

At the onset of the 20th century, Temperance unions existed in every state. By 1916, over half of US states had statutes that prohibited the sale and manufacture of alcohol. In 1919, the 18th Amendment to the US constitution, prohibiting the manufacture, distribution, and sale of alcohol was ratified, and went into effect January 16, 1920.

In October of 1919, the Volstead Act went into effect. This act, which closed loopholes that existed in the previous amendment, stated that “beer, wine, or other intoxicating malt or vinous liquors” meant any beverage that was more than .5% alcohol by volume. The Act also stated that owning any item designed to manufacture alcohol was illegal and it set specific fines and jail sentences for violating Prohibition.

Almost immediately after the ratification of the 18th Amendment, organizations formed to repeal it. The anti-prohibition movement grew in strength as the 1920’s progressed.

On December 5, 1933, the 21st Amendment to the United States Constitution was ratified, making alcohol legal once again. This was the first and to date, the only time in United States history that an Amendment has been repealed.





BEGINNER

US WINE REGULATIONS

Content contributed by Larry Cekola, Imperial Beverage



American Vinticulture Area (AVA) is a recognized wine growing region designated by the US government. The Alcohol & Tobacco Tax and Trade Bureau regulates the industry and must approve the area upon petition from the winery. In 2010, there were 198 AVAs in the US. In order for a winery to place an AVA on their label, a minimum of 85% of the grapes used to produce the wine must be grown in that AVA. With county-specific designated AVAs, the law allows for the use of a minimum of 75%. Most states in the US only require 75% of the grapes to be grown in that state to allow for the state's appellation. California however requires 100% of the grapes to be grown there in order to use it as an appellation designation.

The TTB regulations of the wine industry are minimal, unlike the harsh old-world regulations based on region, variety, elevation and limited irrigation. The TTB has for the most part left the doors open for wineries to produce what they want and where they want it, limiting it only with AVA designations.

The TTB allows for the use of, as they put it, "semi-generic" wine terms on the label. The words Burgundy, Chianti or Champagne may appear on the label of a California wine, when they obviously were not grown in those famous regions of the world. The European wine industry has been lobbying through the World Trade Organization to eliminate the use of these terms, to no avail.

Other than the AVA designations, the TTB has only set forth a few limitations on US wine producers. Ninety five percent of the wine must be grown in a particular year in order to use a vintage specification. On varietal designation, 75% of the wine must be from that grape in order to use the specific varietal on the label. TTB law also requires the Surgeon General's warning on alcohol consumption and the disclosure that it contains sulfites, if applicable.

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