

# Wine Around the World

## French Wines

### History

French wine originated in the 6th century BC, with the colonization of Southern Gaul by Greek settlers. Viticulture soon flourished with the founding of the Greek colony of Marseille. The Roman Empire licensed regions in the south to produce wines. St. Martin of Tours (316–397) was actively engaged in both spreading Christianity and planting vineyards. During the Middle Ages, monks maintained vineyards and, more importantly, conserved wine-making knowledge and skills during that often turbulent period. Monasteries had the resources, security, and motivation to produce a steady supply of wine both for celebrating mass and generating income. During this time, the best vineyards were owned by the monasteries and their wine was considered to be superior. Over time the nobility developed extensive vineyards. However, the French Revolution led to the confiscation of many of the vineyards owned by the Church and others.

The advance of the French wine industry stopped abruptly as first Mildew and then Phylloxera spread throughout the country, indeed across all of Europe, leaving vineyards desolate. Then came an economic downturn in Europe followed by two world wars, and the French wine industry didn't fully recover for decades. Meanwhile competition had arrived and threatened the treasured French "brands" such as Champagne and Bordeaux. This resulted in the establishment in 1935 of the *Appellation d'Origine Contrôlée* to protect French interests. Large investments, the economic upturn following World War 2 and a new generation of *Vignerons* yielded results in the 1970s and the following decades, creating the modern French wines we know today.

### Quality levels and appellation system

In 1935 numerous laws were passed to control the quality of French wine. They established the Appellation d'Origine Contrôlée system, which is governed by a powerful oversight board (Institut National des Appellations d'Origine – INAO). Consequently, France has one of the oldest systems for protected designation of origin for wine in the world, and strict laws concerning winemaking and production. Many other European systems are modeled after it. The word "appellation" has been put to use by other countries, sometimes in a much looser meaning. As European Union wine laws have been modeled after those of the French, this trend is likely to continue with further EU expansion.

### Classification

The wine classification system of France has been under overhaul since 2006, with a new system to be fully introduced by 2012. The new system consists of three categories rather than four, since there will be no category corresponding to VDQS from 2012. The new categories are:

- *Vin de France*, a table wine category basically replacing *Vin de Table*, but allowing grape variety and vintage to be indicated on the label.
- *Indication Géographique Protégée* (IGP), an intermediate category basically replacing *Vin de Pays*.
- *Appellation d'Origine Protégée* (AOP), the highest category basically replacing AOC wines.

### Wine styles, grape varieties and *terroir*

In many respects, French wines have more of a regional than a national identity, as evidenced by different grape varieties, production methods and different classification systems in the various regions. Quality levels and prices vary enormously, and some wines are made for immediate consumption while other are meant for long-time cellaring. If there is one thing that most French wines have in common, it is that most styles have developed as wines meant to accompany food, be it a quick baguette, a simple bistro meal, or a full-fledged multi-course menu. Since the French tradition is to serve wine with food, wines have seldom been developed or styled as "bar wines" for drinking on their own, or to impress in tastings when young.

### Grape Varieties

Numerous grape varieties are cultivated in France, including both internationally well-known and obscure local varieties. In fact, most of the so-called "international varieties" are of French origin, or became known and spread because of their

cultivation in France. Since French appellation rules generally restrict wines from each region, district or appellation to a small number of allowed grape varieties, there are in principle no varieties that are commonly planted throughout all of France.

Most varieties of grape are primarily associated with a certain region, such as Cabernet Sauvignon in Bordeaux and Syrah in Rhône, although there are some varieties that are found in two or more regions, such as Chardonnay in Bourgogne (including Chablis) and Champagne, and Sauvignon Blanc in Loire and Bordeaux. As an example of the rules, although climatic conditions would appear to be favorable, no Cabernet Sauvignon wines are produced in Rhône, Riesling wines in Loire, or Chardonnay wines in Bordeaux. (If such wines were produced, they would have to be declassified to Vin de Pays or French table wine. They would not be allowed to display any appellation name or even region of origin.)

Traditionally, many French wines have been blended from several grape varieties. Varietal white wines have been, and are still, more common than varietal red wines.

## Terroir

The concept of Terroir, which refers to the unique combination of natural factors associated with any particular vineyard, is important to French *vignerons*. It includes such factors as soil, underlying rock, altitude, slope of hill or terrain, orientation toward the sun, and microclimate (typical rain, winds, humidity, temperature variations, etc.). Even in the same area, no two vineyards have exactly the same terroir, thus being the base of the *Appellation d'origine contrôlée* (AOC) system that has been model for appellation and wine laws across the globe. In other words: when the same grape variety is planted in different regions, it can produce wines that are significantly different from each other. In France the concept of *terroir* manifests itself most extremely in the Burgundy region. The amount of influence and the scope that falls under the description of *terroir* has been a controversial topic in the wine industry.

## Labeling practices

The amount of information included on French wine labels varies depending on which region the wine was made in, and what level of classification the wine carries. As a minimum, labels will usually state that classification, as well as the name of the producer, and, for wines above the Vin De Table level, will also include the geographical area where the wine was made. Sometimes that will simply be the wider region where the wine was made, but some labels, especially for higher quality wines, will also include details of the individual village or commune, and even the specific vineyard where the wine was sourced. With the exception of wines from the Alsace region, France had no tradition of labeling wines with details of the grape varieties used. Since New World wines made the names of individual grape varieties familiar to international consumers in the late 20th century, more French wineries started to use varietal labeling. If varietal names are displayed, common EU rules apply:

- If a single varietal name is used, the wine must be made from a minimum of 85% of this variety.
- If two or more varietal names are used, only the displayed varieties are allowed.
- If two or more varietal names are used, they must generally appear in descending order.

The recognized wine producing areas in France are regulated by the Institut National des Appellations d'Origine – INAO in acronym. Every appellation in France is defined by INAO, in regards to the individual regions particular wine "character." If a wine fails to meet the INAO's strict criteria it is declassified into a lower appellation or even into Vin de Pays or Vin de Table. With the number of appellations in France too numerous to mention here, they are easily defined into one of the main wine producing regions listed below:

**Alsace** is primarily a white-wine region, though some red, rosé, sparkling and sweet wines are also produced. It is situated in eastern France on the river Rhine and borders Germany, a country with which it shares many grape varieties as well as a long tradition of varietal labeling. Grapes grown in Alsace include Riesling, Gewurztraminer, Pinot Gris, Pinot Blanc, Pinot Noir, and Muscat.

**Bordeaux** is a large region on the Atlantic coast, which has a long history of exporting its wines overseas. This is primarily a red wine region, famous for the wines Château Lafite-Rothschild, Château Latour, Château Mouton-Rothschild, Château Margaux and Château Haut-Brion from the Médoc sub-region; Château Cheval Blanc and Château Ausone in Saint-Émilion; and Château Pétrus and Château Le Pin in Pomerol. The red wines

produced are usually blended, from Cabernet Sauvignon, Merlot and sometimes Cabernet Franc. Bordeaux also makes dry and sweet white wines, including some of the world's most famous sweet wines from the Sauternes appellation, such as Château d'Yquem.

**Burgundy** or *Bourgogne* in eastern France is a region where red and white wines are equally important. Probably more terroir-conscious than any other region, Burgundy is divided into the largest number of appellations of any French region. The top wines from Burgundy's heartland in Côte d'Or command high prices. The Burgundy region is divided in four main parts:

- The Cote de Nuits
- The Cote de Beaune
- The Cote Chalonnaise
- The Maconnais

There are two main grape varieties used in Burgundy – Chardonnay for white wines, and Pinot Noir for red. White wines are also sometimes made from Aligoté, and other grape varieties will also be found occasionally.

**Champagne**, situated in eastern France, close to Belgium and Luxembourg, is the coldest of France's major wine regions and home to its major sparkling wine. Champagne wines can be both white and rosé. A small amount of still wine is produced in Champagne of which some can be red wine.

**Corsica** is an island in the Mediterranean the wines of which are primarily consumed on the island itself.

**Jura** is a small region in the mountains close to Switzerland where some unique wine styles, notably *Vin Jaune* and *Vin de Paille*, are produced. The region covers six appellations and is related to Burgundy through its extensive use of the Burgundian grapes Chardonnay and Pinot Noir, though other varieties are used. It also shares cool climate with Burgundy.

**Languedoc-Roussillon** is the largest region in terms of vineyard surface, and the region in which much of France's cheap bulk wines have been produced.

**Loire** valley is a primarily white-wine region that stretches over a long distance along the Loire River in central and western France, and where grape varieties and wine styles vary along the river. Four sub-regions are situated along the river:

**Upper Loire** is known for its Sauvignon Blanc, producing wines such as Sancerre AOC, but also consisting of several VDQS areas.

**Touraine** produces cold climate-styled white wines (dry, sweet or sparkling) from Chenin Blanc in Vouvray AOC and red wines from Cabernet Franc in Bourgueil AOC and Chinon AOC.

**Anjou-Saumur** is similar to the Tourain wines with respect to varieties, but the dry Savennières AOC and sweet Coteaux du Layon AOC are often more powerful than their upstream neighbors.

**Pays Nantais** is situated closest to the Atlantic, and Muscadet AOC produces white wines from the Melon de Bourgogne grape.

**Provence** is in the south-east and close to the Mediterranean. It is perhaps the warmest wine region of France and produces mainly rosé and red wine. Provence also has a classification of its most prestigious estates, much like Bordeaux.

**Rhone Valley** is primarily a red-wine region in south-eastern France, along the Rhône River. The styles and varietal composition of northern and southern Rhône differ, but both parts compete with Bordeaux as traditional producers of red wines.

**Savoy** or *Savoie* is primarily a white-wine region in the Alps close to Switzerland, where many grapes unique to this region are cultivated.

**South West France** or *Sud-Ouest*, is a somewhat heterogeneous collection of wine areas inland or south of Bordeaux. Some areas produce primarily red wines in a style reminiscent of red Bordeaux, while other produce dry or sweet white wines.

## Italian Wine

Italy is home to some of the oldest wine-producing regions in the world. Italy is one of the world's foremost producers, responsible for approximately one-fifth of world wine production in 2005. Italy is the second largest wine producer after

France, and in 2008 the country surpassed France for the title of world's biggest producer for the first time in a decade, at nearly six billion liters. Italian wine is exported largely around the world and has market share of over 10% in most Asian countries like India. Wine is extremely popular in Italy. Italians lead the world in wine consumption by volume. More than 1 million vineyards are under cultivation.

## History

Although vines had been cultivated from the wild *Vitis vinifera* grape for millennia, it wasn't until the Greek colonization that wine-making flourished. Viticulture was introduced into Sicily and southern Italy by the Mycenaean Greeks, and was well established when the extensive Greek colonization transpired around 800 BC. It was during the Roman defeat of the Carthaginians (acknowledged masters of wine-making) in the 2nd century BC that Italian wine production began to further flourish. Large-scale, slave-run plantations sprang up in many coastal areas and spread to such an extent that, in AD 92, Emperor Domitian was forced to destroy a great number of vineyards in order to free up fertile land for food production.

During this time, viticulture outside of Italy was prohibited under Roman law. Exports to the provinces were reciprocated in exchange for more slaves, especially from Gaul where trade was intense, due to the inhabitants being besotted with Italian wine, drinking it unmixed and without restraint. It was customary to mix wine with a good proportion of water which may otherwise have been unpalatable, making wine drinking a fundamental part of early Italian life.

As the laws on provincial viticulture were relaxed, vast vineyards began to flourish in the rest of Europe, especially Gaul (present day France) and Hispania. This coincided with the cultivation of new vines, like biturica (ancestor of the Cabernets). These vineyards became hugely successful, to the point that Italy ultimately became an import center for provincial wines.

Depending on the vintage, modern Italy is the world's largest or second largest wine producer. In 2005, production was about 20% of the global total, second only to France, which produced 26%. In the same year, Italy's share in dollar value of table wine imports into the U.S. was 32%, Australia's was 24%, and France's was 20%. Along with Australia, Italy's market share has rapidly increased in recent years.

## Italian Appellation System

Italy's classification system has four classes of wine, with two falling under the EU category *Quality Wine Produced in a Specific Region* (QWPSR) and two falling under the category of 'table wine'. The four classes are:

### Table Wine:

- **Vino da Tavola (VDT)** - Denotes simply that the wine is made in Italy. The label usually indicates a basic wine, made for local consumption.
- **Indicazione Geografica Tipica (IGT)** - Denotes wine from a more specific region within Italy. This appellation was created in 1992 for wines that were considered to be of higher quality than simple table wines, but which did not conform to the strict wine laws for their region. Before the IGT was created, "Super Tuscan" wines such as Tignanello were labeled *Vino da Tavola*.

### QWPSR:

- **Denominazione di Origine Controllata (DOC)**
- **Denominazione di Origine Controllata e Garantita (DOCG)**

Both DOC and DOCG wines refer to zones which are more specific than an IGT, and the permitted grapes are also more specifically defined. The DOC system began in 1963, seeking to establish a method of both recognizing quality product and maintaining the international and national reputation of that product. The main difference between a DOC and a DOCG is that the latter must pass a blind taste test for quality in addition to conforming to the strict legal requirements to be designated as a wine from the area in question. After the sweeping wine laws of 1992, transparent rules were made regarding requirements for DOCG entry, imposing new limits regarding the production of grapes per hectare and minimum natural alcohol levels, among others. The overall goal of the system is to encourage producers to focus on quality wine making.

## Wine Regions

Italy's 20 wine regions correspond to the 20 administrative regions. Understanding of Italian wine becomes clearer with an understanding of the differences between each region; their cuisines reflect their indigenous wines, and vice-versa.

The 36 DOCG wines are located in 13 different regions but most of them are concentrated in Piedmont and Tuscany. Among these are appellations appreciated and sought after by wine lovers around the world: Barolo, Barbaresco, and Brunello di Montalcino (colloquially known as the "Killer B's"). The regions are, roughly from Northwest to Southeast: Aosta Valley (*Valle D'Aosta*), Piedmont (*Piemonte*), Liguria, Lombardy (*Lombardia*), Trentino-Alto Adige/Südtirol, Friuli-Venezia Giulia, Veneto, Emilia-Romagna, Tuscany (*Toscana*), Marche (*Le Marche*), Umbria, Lazio, Abruzzo, Molise, Campania, Basilicata, Apulia (*Puglia*), Calabria, Sicily (*Sicilia*), Sardinia (*Sardegna*)

## Spanish wine

Spanish wines are wines produced in the southwestern European country of Spain. Located on the Iberian Peninsula, Spain has over 2.9 million acres planted—making it the most widely planted wine producing nation but it is only the third largest producer of wine in the world, the largest being France followed by Italy. This is due, in part, to the very low yields and wide spacing of the old vines planted on the dry, infertile soil found in many Spanish wine regions. The country is ninth in worldwide consumptions with Spaniards drinking, on average, 10.06 gallons a year. The country has an abundance of native grape varieties, with over 400 varieties planted throughout Spain though 80 percent of the country's wine production is from only 20 grapes—including Tempranillo, Albariño, Garnacha, Palomino, Airen, Macabeo, Parellada, Xarel·lo, Cariñena and Monastrell. Major Spanish wine regions include the Rioja and Ribera del Duero which is known for their Tempranillo production; Jerez, the home of the fortified wine Sherry; Rías Baixas in the northwest region of Galicia that is known for its white wines made from Albariño and Catalonia which includes the Cava and still wine producing regions of the Penedès as well the Priorat region.

## Geography and climate

One of the dominant geographical influences of Spanish viticulture is the vast plateau known as the Meseta Central that covers much of central Spain. From there flow to the sea several of Spain's principal rivers that are at the heart of many Spanish wine regions. These include the eastward flowing Ebro river that runs through the Rioja and several Catalan wine regions; the Duero which flows westward through the Ribera del Duero region in Spain before crossing the border into Portugal's Douro Valley which is at the heart of Port wine production; the Tajo which runs through the La Mancha region; Guadalquivir which flows into the Atlantic at the Sherry producing village of Sanlúcar de Barrameda. In addition to the Meseta Central, several mountain ranges known as *cordilleras* serve to isolate and influence the climate of several Spanish wine regions. These include the Cantabrian Mountains that spur westward from the Pyrenees and protect regions like the Rioja from the rain and the cool of westerlies coming from the Bay of Biscay. The Cantabrian Mountains act as a rain shadow with the coastal regions of the Basque Country receiving an average of 59 inches while the winemaking region of Rioja, near Haro, around 62 miles away receives only 18 inches. In Galicia on the northwest coast, the region receives annual rainfall that ranges from 39 inches on the coast to 79 inches near the mountainous border of Castile and León.

The climate gets more extreme further inland towards the Meseta Central and is characterized by hot summers with temperatures that can reach 104 °F with drought conditions. Many regions receive less than 12 inches of rain annually with most of the rain falling during sudden downpours in the spring and autumn that can pose the risk of flash flooding. Winters in these regions are characterized by cold temperatures that can often fall below freezing around -8 °F. Towards the southeast, around Valencia, the climate is more moderate with the strong Mediterranean influence. In the south, the Sherry and Malaga producing regions of Andalusia contain some of the hottest parts of Spain. North of the Sierra Nevada Mountains in the Guadalquivir Valley, temperatures often reach 113 °F in the summer. To adapt to these high temperatures, many Spanish vineyards will be planted on higher elevations, with many vineyards located over 2,000 feet above sea level. These high altitudes create a large diurnal temperature variation with low night time temperatures that allow the grapes to maintain acidity levels and coloring. Regions with lower altitude vineyards, such as along the southern Mediterranean coast, are suitable for producing grapes of high alcohol levels and low acidity.

## Classification

Spanish wine laws created the *Denominación de Origen* (DO) system in 1932 and were later revised in 1970. TAs of 2009, there were 77 Quality Wine areas across Spain. In addition there is *Denominación de Origen Calificada* (DOCa or DOQ in Catalan) status for DOs that have a consistent track record for quality. There are currently two DOCa/DOQ regions: Rioja and Priorat. Each DO has a Consejo Regulador, which acts as a governing control body that enforces the DO regulations and standards involving viticultural and winemaking practices. These regulations govern everything from

the types of grapes that are permitted to be planted, the maximum yields that can be harvested, the minimum length of time that the wine must be aged and what type of information is required to appear on the wine label.

Following Spain's acceptance into the European Union, Spanish wine laws were brought in line to be more consistent with other European systems. One development was a five-tier classification system that is administered by each autonomous region. Non-autonomous areas or wine regions whose boundaries overlap with other autonomous communities (such as Cava, Rioja and Jumilla) are administered by the *Instituto Nacional de Denominaciones de Origen* (INDO) based in Madrid. The five-tier classifications, starting from the bottom, include:

- **Vino de Mesa (VdM)** - These are wines that are the equivalent of most country's table wines and are made from unclassified vineyards or grapes that have been declassified through "illegal" blending. Similar to the Italian Super Tuscans from the late 20th century, some Spanish winemakers will intentionally declassify their wines so that they have greater flexibility in blending and winemaking methods.
- **Vinos de la Tierra (VdIT)** - This level is similar to France's *vin de pays* system, normally corresponding to the larger *comunidad autónoma* geographical regions and will appear on the label with these broader geographical designations like Andalucía, Castilla La Mancha and Levante.
- **Vino de Calidad Producido en Región Determinada (VCPRD)** - This level is similar to France's *Vin Délimité de Qualité Supérieure* (VDQS) system and is considered a stepping stone towards DO status.
- **Denominación de Origen (Denominació d'Origen in Catalan - DO)**- This level is for the mainstream quality-wine regions which are regulated by the Consejo Regulador who is also responsible for marketing the wines of that DO. In 2005, nearly two thirds of the total vineyard area in Spain was within the boundaries a DO region.
- **Denominación de Origen Calificada (DOCa/DOQ - Denominació d'Origen Qualificada in Catalan)**- This designation, which is similar to Italy's *Denominazione di Origine Controllata e Garantita* (DOCG) designation, is for regions with a track record of consistent quality and is meant to be a step above DO level. Rioja was the first region afforded this designation in 1991 and was followed by Priorat in 2003, and Ribera del Duero in 2008.

## Spanish labeling laws

Spanish wines are often labeled according to the amount of ageing the wine has received. When the label says *vino joven* ("young wine") or *sin crianza*, the wines will have undergone very little, if any, wood ageing. Depending on the producer, some of these wines will be meant to be consumed very young - often within a year of their release. Others will benefit from some time ageing in the bottle. For the vintage year (*vendimia* or  *cosecha*) to appear on the label, a minimum of 85% of the grapes must be from that year's harvest. The three most common ageing designations on Spanish wine labels are *Crianza*, *Reserva* and *Gran Reserva*.

- **Crianza** red wines are aged for 2 years with at least 6 months in oak. *Crianza* whites and rosés must be aged for at least 1 year with at least 6 months in oak.
- **Reserva** red wines are aged for at least 3 years with at least 1 year in oak. *Reserva* whites and rosés must be aged for at least 2 years with at least 6 months in oak.
- **Gran Reserva** wines typically appear in above average vintages with the red wines requiring at least 5 years ageing, 18 months of which in oak and a minimum of 36 months in the bottle. *Gran Reserva* whites and rosés must be aged for at least 4 years with at least 6 months in oak.

## Wine regions

Spain has a relatively large number of distinct wine-producing regions, more than half having the classification *Denominación de Origen* (DO) with the majority of the remainder classified as *Vinos de la Tierra* (VdIT). There are two regions nominated as *Denominación de Origen Calificada* (DOCa) - Rioja and Priorato - the flagship regions of Spanish winemaking. While most make both red and white wine, some wine regions are more dominated by one style than the other.

## Port Wine

Port wine is a Portuguese fortified wine produced exclusively in the Douro Valley in the northern provinces of Portugal. It is typically a sweet, red wine, often served as a dessert wine, and comes in dry, semi-dry, and white varieties. Fortified wines in the style of port are also produced outside of Portugal, most notably in Australia, South Africa, Canada, India, Argentina, and the United States. Under European Union Protected Designation of Origin guidelines, only the product from Portugal may be labeled as port or Porto. Elsewhere, the situation is more complicated: wines labeled "port" may come from anywhere in the world, while the names "Dão", "Oporto", "Porto", and "Vinho do Porto" have been recognized as foreign, non-generic names for wines originating in Portugal.

Port is produced from grapes grown and processed in the demarcated Douro region. The wine produced is then fortified by the addition of a neutral grape spirit known as aguardente in order to stop the fermentation, leaving residual sugar in the wine, and to boost the alcohol content. The fortification spirit is sometimes referred to as brandy but it bears little resemblance to commercial brandies. The wine is then stored and aged, often in barrels stored in a cave (pronounced "ka-ve" and meaning "cellar" in Portuguese) as is the case in Vila Nova de Gaia, before being bottled. The wine received its name, "port", in the latter half of the 17th century from the seaport city of Porto at the mouth of the Douro River, where much of the product was brought to market or for export to other countries in Europe. The Douro valley where port wine is produced was defined and established as a protected region or appellation in 1756, making it the oldest defined and protected wine region in the world. Chianti (1716) and Tokaj (1730) have older demarcation but no regulation associated and thus, in terms of regulated demarcated regions, Porto is the oldest.

## The Douro River Valley: growth and production

The reaches of the valley of the Douro River in northern Portugal have a microclimate that is optimal for cultivation of olives, almonds, and especially grapes important for making port wine. The region around Pinhão and São João da Pesqueira is considered to be the center of port production, and is known for its picturesque *quintas*—farms clinging on to almost vertical slopes dropping down to the river.

## Grapes

Over a hundred varieties of grapes are sanctioned for port production, although only five (Tinta Barroca, Tinta Cão, Tinta Roriz (Tempranillo), Touriga Francesa, and Touriga Nacional) are widely cultivated and used. Touriga Nacional is widely considered the most desirable port grape but the difficulty in growing it and the small yields cause Touriga Francesa to be the most widely planted grape. White ports are produced the same way as red ports, except that they use white grapes. While a few shippers have experimented with Ports produced from a single variety of grapes, all Ports commercially available are from a blend of different grapes. Since the Phylloxera crisis, most vines are grown on grafted rootstock, with the notable exception of the Nacional area of Quinta do Noval, which, since being planted in 1925, has produced some of the most expensive vintage ports.

## Properties

Port wine is typically richer, sweeter, heavier, and possesses a higher alcohol content than most other wines. This is caused by the addition of distilled grape spirits to fortify the wine and halt fermentation before all the sugar is converted to alcohol and results in a wine that is usually either 19.5% or 20% alcohol.

Port is commonly served after meals as a dessert wine, often with cheese; commonly stilton. White and tawny ports are often served as an apéritif.

## Styles

Port from Portugal comes in several styles, which can be divided into two broad categories:

- Wines that have matured in sealed glass bottles, with no exposure to air, and experience what is known as "reductive" aging. This process leads to the wine losing its color very slowly and produces a wine which is smoother on the palate and less tannic.
- Wines that have matured in wooden barrels, whose permeability allows a small amount of exposure to oxygen, and experience what is known as "oxidative" aging. They too lose color, but at a faster pace. They also lose volume to evaporation (angel's share), leaving behind a wine that is slightly more viscous.

The IVDP (*Instituto dos Vinhos do Douro e Porto*) further divides port into two categories: normal ports (standard rubies, tawnies and white ports) and *Categorias Especiais*, *special categories*, which includes everything else.

## Barrel-aged ports

### Tawny port

Tawny ports are wines made from red grapes that are aged in wooden barrels using the Solera process, exposing them to gradual oxidation and evaporation. As a result, they gradually mellow to a golden-brown color. The exposure to oxygen imparts "nutty" flavors to the wine, which is blended to match the house style. Tawny ports are sweet or medium dry and typically consumed as a dessert wine.

When a port is described as tawny, without an indication of age, it is a basic blend of wood aged port that has spent at least two years in barrels. Above this are tawny with an indication of age which represent a blend of several vintages, with the average years "in wood" stated on the label. The official categories are 10, 20, 30 and over 40 years. The categories indicate a target age profile for the ports, not their actual ages, though many people mistakenly believe that the categories indicate the minimum average ages of the blends. It is also possible to produce an aged white port in the manner of a tawny, with a number of shippers now marketing 10 year old white ports.

## Bottle-aged Ports

**Ruby port** is the cheapest and most extensively produced type of port. After fermentation, it is stored in tanks made of concrete or stainless steel to prevent oxidative aging and preserve its rich claret color. The wine is usually blended to match the style of the brand to which it is to be sold. The wine is fined and cold filtered before bottling and does not generally improve with age.

**Reserve port** is a premium ruby port approved by the IVDP's tasting panel, the *Câmara de Provedores*.

**Pink port** is a relatively new variation on the market, first released in 2008 by Pocas, one of the last family owned vineyards in the Douro Valley, and Croft and the Taylor Fladgate Partnership for Marks and Spencer. It is made with the same grapes and according to the same extremely strict rules that govern the production of vintage and tawny and ruby ports. It is technically a ruby port, but fermented the way a rosé wine would be, with a limited exposure to the grape skins, thus the pink color. Bearing the hallmarks of a light ruby with its taste being lighter in style and containing a fruity flavor, it is commonly served cold.

**White port** is made from white grapes and can be made in a wide variety of styles, although few shippers produce anything apart from a basic product that is similar to a standard ruby. White port can be used as the basis for a cocktail or served on its own. There is a range of styles of white port, from dry to very sweet. When white ports are matured for long periods, the color darkens, eventually reaching a point where it can be hard to discern (from appearance alone) whether the original wine was red or white.

**Late bottled vintage** (often referred to simply as LBV) was originally wine that had been destined for bottling as vintage port, but because of lack of demand was left in the barrel for longer than had been planned. Over time it has become two distinct styles of wine, both of them bottled between four and six years after the vintage, but one style is fined and filtered before bottling, while the other is not.

**Crusted port** is usually a blend of port wine from several vintages, although single vintage crusted ports have sometimes been made in the past. Unlike vintage port, which has to be sourced from grapes from a single vintage, crusted port affords the port blender the opportunity to make best use of the varying characteristics of different vintages. Crusted port is bottled unfiltered, and sealed with a driven cork. Like vintage port it needs to be decanted before drinking. Although crusted ports will improve with age, the blender often seeks to make these wines approachable at a younger age than for his vintage ports. The date on a crusted port bottle refers to the bottling date, not the year the grapes were grown. While crusted port is required to be aged in bottle for at least three years before it is released to the market, most producers keep the bottles for considerably longer; so they are ready to be drunk when sold, and may be enjoyed by consumers who have no space to cellar bottles.

**Vintage port** is made entirely from the grapes of a declared vintage year and accounts for about two percent of a year's total port production. Not every year is declared a vintage in the Douro. The decision on whether to declare a vintage is made in the spring of the second year following the harvest. The decision to declare a vintage is made by each individual port house, often referred to as a "shipper." While it is by far the most renowned type of port, from a volume and revenue standpoint, vintage port actually makes up only a small percentage of the production of most shippers. Vintage ports are aged in barrels for a maximum of two and a half years before bottling, and generally require another ten to thirty years of aging in the bottle before reaching what is considered a proper drinking age. Since they are aged in barrels for only a short time, they retain their dark ruby color and fresh fruit flavors. Particularly fine vintage ports can continue to gain complexity and drink wonderfully for many decades after they were bottled. It is not unknown for century old bottles still to be in perfect condition for consumption.

**Single quinta vintage ports** are wines that originate from a single estate, unlike the standard bottlings of the port wine houses which can be sourced from a number of quintas. Single quinta bottlings are used in two different ways by different producers. Most of the large port wine houses have a single quinta bottling which is only produced in some years when the regular vintage port of the house is not declared. In those years, wine from their best quinta is still bottled under a vintage designation, rather than being used for simpler port qualities. In a sense, this kind of single quinta is a "second wine" of the regular vintage port and is typically sold slightly cheaper than the regular vintage Port. Graham's Quinta dos Malvedos and Taylor's Quinta de Vargellas are examples of this kind of port. Typically, this type of single quinta bears the name of both a major port wine house and the name of a quinta.

## Vintages

The term vintage has a distinct meaning in the context of vintage port. While a vintage is simply the year in which a wine is made, most producers of vintage port restrict their production of year-labeled bottlings to only the best years, a few per decade. If a port house decides that its wine is of quality sufficient for a vintage, samples are sent to the IVDP for approval and the house *declares* the vintage. In very good years, almost all the port houses will declare their wines. In intermediate years, the producers of blended vintage ports will not declare their flagship port, but may decide to declare the vintage of a single quinta, e.g. the 1996 Dow's Quinta do Bomfim and Taylor's Quinta de Vargellas. Some houses now choose to declare their wines on all but the worst years: Quinta do Vesuvio has declared a vintage every year with the exceptions of 1993 and 2002.

## Storing and serving

Port, like other wine, should be stored in a cool but not cold, dark location with a steady temperature, laying the bottle on its side if the bottle has a cork, or standing up if stoppered. With the exception of white port, which can be served chilled, port should be served at between 59 to 68 degrees Fahrenheit. Tawny port may also be served slightly cooler.

Once opened, port generally lasts longer than unfortified wine but is still best if consumed within a short period of time. Those with stoppers can be kept for a couple of months in a dark place, but if it has a cork it must be consumed sooner. Typically, the older the vintage, the quicker it must be consumed.

## Madeira Wine

Madeira is a fortified Portuguese wine made in the Madeira Islands. Some wines produced in small quantities in California and Texas are also referred to as "Madeira", or "Madera", though it is not correct. The wine is produced in a variety of styles ranging from dry wines which can be consumed on their own as an aperitif, to sweet wines more usually consumed with dessert. Cheaper versions are often flavored with salt and pepper for use in cooking. The islands of Madeira have a long winemaking history dating back to the Age of Exploration when Madeira was a standard port of call for ships heading to the New World or East Indies. To prevent the wine from spoiling, neutral grape spirits were added. On the long sea voyages, the wines would be exposed to excessive heat and movement which transformed the flavor of the wine as the wine producers of Madeira found out when an unsold shipment of wine returned to the islands after a round trip. Today, Madeira is noted for its unique winemaking process which involves heating the wine up to temperatures as high as 140 °F for an extended period of time and deliberately exposing the wine to some levels of oxidation. Because of this unique process, Madeira is a very robust wine that can be quite long lived even after being opened.

## History

Madeira's location made it an ideal stopping location for voyages to the New World and East Indies. The roots of Madeira's wine industry dates back to the Age of Exploration when Madeira was a regular port of call for ships travelling to the New World and East Indies. By the 16th century, records indicate that a well-established wine industry on the island was able to supply these ships with wine for the long voyages across the sea. The earliest examples of Madeira, like Port, were unfortified and had the habit of spoiling at sea. Following the example of Port, a small amount of distilled alcohol made from cane sugar was added to stabilize the wine by boosting the alcohol content. (The modern process of fortification using brandy did not become widespread till the 18th century). The Dutch East India Company became a regular customer, picking up large casks of wine known as *pipes* for their voyages to India. The intense heat and constant movement of the ships had a transforming effect on the wine, as discovered by Madeira producers when one shipment was returned to the island after a long trip. It was found that the customer preferred the taste of this style of wine and Madeira labeled as *vinho da roda* (wines that have made a round trip) became very popular. Madeira producers found that aging the wine on long sea voyages was very costly and began to develop methods on the island to produce the same aged and heated style. They began storing the wines on trestles at the winery or in special rooms known as *estufas* where the heat of island sun would age the wine.

The 18th century was the "golden age" for Madeira with the wine's popularity extending from the American colonies and Brazil in the New World to Great Britain, Russia and Northern Africa. The American colonies, in particular, were enthusiastic customers consuming as much as a quarter of all wine produced on the island each year. The mid-19th century ushered an end to the industry's prosperity, first with the 1851 discovery of powdery mildew that severely

reduced production over the next three years. Just as the industry was recovering through the use of the sulfur-based Bordeaux mixture, the phylloxera epidemic that had plagued France and other European wine regions reached the island. By the end of the 19th century, most of the island's vineyards had been uprooted and many were converted to sugar cane production. The majority of the vineyards that did replant chose to use American vine varieties like *Vitis labrusca*, *Vitis riparia* and *Vitis rupestris* or hybrid grape varieties rather than replant with the *Vitis vinifera* varieties that were previously grown. By the turn of the 20th century, sales started to slowly return to normal until the industry was rocked again by the Russian Revolution and American Prohibition which closed off two of Madeira's biggest markets.

The rest of the 20th century saw a downturn for Madeira, both in sales and reputation, as low quality "cooking wine" became primarily associated with the island — much as it had for Marsala. But towards the end of the century, some producers started a renewed focus on quality — ripping out the hybrid and American vines and replanting with the "noble grape" varieties of Sercial, Verdelho, Bual and Malvasia. The "workhorse" varieties of Tinta Negra Mole and Complexa are still present and in high use but hybrid grapes were officially banned from wine production in 1979. Today, Madeira's primary markets are in the Benelux countries, France and Germany with emerging markets growing in Japan, the United Kingdom and the United States.

## Viticulture

The island of Madeira has an oceanic climate with some tropical influences. With high rainfall and average mean temperature of 66 °F, the threats of fungal grape diseases and botrytis rot are constant viticultural hazards. To combat these threats, Madeira vineyards are often planted low trellises known as *latada* that raise the canopy of the vine off the ground similar to a style used in the Vinho Verde region of Portugal. The terrain of the mountainous volcanic island is difficult to cultivate with vineyards planted on man-made terraces of red and basaltic bedrock. These terraces are very similar to the terraces of the Douro that make Port wine production possible.

## Grape varieties

There are four major types of Madeira, named according to the grape variety used. Ranging from the sweetest to the driest style they are: Malvasia (also known as Malmsey or Malvazia), Bual (or Boal), Verdelho, and Sercial. Occasionally one sees Terrantez, Bastardo and Moscatel varieties, although these are now increasingly rare on the island because of oidium and phylloxera. After the phylloxera epidemic, many wines were "mislabelled" as containing one of these noble grape varieties, which were reinterpreted as "wine styles" rather than true varietal names. Since the epidemic, Tinta Negra Mole and Complexa is the workhorse variety on the island and is found in various concentrations in many blends and vintage wines. Of these, Bastardo and Tinta Negra Mole are red grape varieties, the rest are all white.

## Winemaking

The initial winemaking steps of Madeira start out like most other wines with the grapes being harvested, crushed, pressed and then fermented in either stainless steel or oak casks. The grape varieties destined for sweeter wines, Boal and Malvasia, are often fermented on their skins to leach more phenols from the grapes to balance the sweetness of the wine. The more dry wines made from Sercial, Verdelho and Tinta Negra Mole are separated from their skins prior to fermentation. Depending on the level of sweetness desired, fermentation of the wine is halted at some point by the addition of neutral grape spirits. Producers of cheaper Madeira will usually ferment the wine completely dry, regardless of grape variety, and then fortify the wine so as not to lose any alcohol to evaporation during the *estufagem* aging (see below). The wines are then artificially sweetened and colored.

- **Sercial** is nearly fermented completely dry with very little residual sugar (0.5 to 1.5° on the Baumé scale). This style of wine is characterized with high-toned colors, almond flavors and high acidity.
- **Verdelho** has its fermentation halted a little earlier than Sercial when its sugars are between 1.5 to 2.5° Baumé. This style of wine is characterized by smoky notes and high acidity.
- **Boal** has its fermentation halted when its sugars are between 2.5 to 3.5° Baumé. This style of wine is characterized by its dark color, medium rich texture with raisin flavors.
- **Malmsey** has its fermentation halted when its sugars are between 3.5 to 6.5° Baumé. This style of wine is characterized by its dark color, rich texture with coffee-caramel flavors. Like other Madeiras made from the noble grape varieties, the Malvasia grape used in Malmsey production has naturally high levels of acidity in the wine which balances with the high sugar levels so that the wines do not taste cloying sweet.

## Estufagem

What makes Madeira wine production unique is the *estufagem* aging process meant to duplicate the effect of a long sea voyage of the aging barrels through tropical climates. There are three main methods used to heat age the wine, used according to the quality and cost of the finished wine. The most common, (Cuba de Calor) used for low cost Madeira, is bulk aging in low stainless steel or concrete tanks surrounded by either heat coils or piping that allows hot water to circulate around the container. The wine is heated to temperatures as high as 130 °F for a minimum of 90 days as regulated by the Madeira Wine Institute. The second method (Armazém de Calor) only used by the Madeira Wine Institute, involves storing the wine in large wooden cask in a specially designed room outfitted with steam producing tanks or pipes that heat the room, creating a type of sauna. This process more gently exposes the wine to heat and can last from six months to over a year. The third method (Canteiro) is used for the highest quality Madeiras aged without the use of any artificial heat, being stored by the winery in warm rooms left to age by the heat of the sun. In cases like vintage Madeira, this heating process can last for from 20 years to 100 years.

Much of the characteristic flavor of Madeira is due to this practice, which hastens the mellowing of the wine and also tends to check secondary fermentation in as much as it is, in effect, a mild kind of pasteurization. Furthermore, the wine is deliberately exposed to air, causing it to oxidize. The resulting wine has a color similar to a tawny port. Colorings such as caramel coloring have been used in the past as a coloring to give some consistency, although this practice is decreasing. Wine tasters sometimes describe an oxidized wine as being *maderized*.

## Characteristics

Exposure to extreme temperature and oxygen accounts for its stability; an opened bottle of Madeira will survive unharmed for a considerable time, up to a year. Properly sealed in bottles, Madeira is one of the longest lasting wines; Madeiras have been known to survive over 150 years in excellent condition. It is not uncommon to see Madeiras pushing the century mark for sale at stores that specialize in rare wine. Vintages dating back to 1780 are known to exist.

Before the advent of artificial refrigeration, Madeira wine was particularly prized in areas where it was impractical to construct wine cellars (such as those in parts of the southern United States) because unlike many other fine wines it could survive being stored over hot summers without significant damage.

Lower quality Madeira wines may be flavored with salt and pepper to prevent their sale as Madeira wine. Instead they are exported—mainly to France—for cooking purposes. This wine is most commonly used in Madeira Sauce.

## Australian Wine

### History

Vine cuttings from the Cape of Good Hope were brought to the penal colony of New South Wales by Governor Phillip on the First Fleet (1788). An attempt at wine making from these first vines failed, but with perseverance, other settlers managed to successfully cultivate vines for winemaking, and Australian made wine was available for sale domestically by the 1820s. In 1822 Gregory Blaxland became the first person to export Australian wine, and was the first winemaker to win an overseas award. In 1830 vineyards were established in the Hunter Valley. In 1833 James Busby returned from France and Spain with a serious selection of grape varieties including most classic French grapes and a good selection of grapes for fortified wine production. Wine from the Adelaide Hills was sent to Queen Victoria in 1844, but there is no evidence that she placed an order as a result. The production and quality of Australian wine was much improved by the arrival of free settlers from various parts of Europe, who used their skills and knowledge to establish some of Australia's premier wine regions. For example, emigrants from Prussia in the mid-1850s were important in establishing South Australia's Barossa Valley as a winemaking region.

Early Australian winemakers faced many difficulties, particularly due to the unfamiliar Australian climate. However they eventually achieved considerable success. "At the 1873 Vienna Exhibition the French judges, tasting blind, praised some wines from Victoria, but withdrew in protest when the provenance of the wine was revealed, on the grounds that wines of that quality must clearly be French." Australian wines continued to win high honors in French competitions. A Victorian Syrah (also called Shiraz) competing in the 1878 Paris Exhibition was likened to Château Margaux and "its taste completed its trinity of perfection." One Australian wine won a gold medal "first class" at the 1882 Bordeaux International Exhibition and another won a gold medal "against the world" at the 1889 Paris International Exhibition. That was all before the destructive effects on the industry of the phylloxera epidemic.

In the decades following the devastation caused by phylloxera until the late 1970s, Australian wine production consisted largely, but not exclusively, of sweet and fortified wines. Since then, Australia has rapidly become a world leader in both the quantity and quality of wines it produces. For example, Australian wine exports to the US rose from 578,000 cases in 1990 to 20,000,000 cases in 2004 and in 2000 it exported more wine than France to the UK for the first time in history. The industry has also suffered hard times in the last 20 years. In the late 1980s, governments sponsored growers to pull out their vines to overcome a glut of wine grapes. Low grape prices in 2005 and 2006 have led to calls for another sponsored vine pull. Cleanskin wines were introduced into Australia during the 1960s as a means to combat oversupply and poor sales.

In recent years organic and biodynamic wines have been increasing in popularity, following a worldwide trend. In 2004 Australia hosted the First International Biodynamic Wine Forum in Beechworth, Victoria which brought together biodynamic wine producers from around the globe. Despite the overproduction of grapes many organic and biodynamic growers have enjoyed continuing demand thanks to the premium prices winemakers can charge for their organic and biodynamic products, particularly in the European market.

## Grape Varieties

Major grape varieties are Shiraz, Cabernet Sauvignon, Merlot, Chardonnay, Sauvignon Blanc, Sémillon, and Riesling. The country has no native grapes, and *Vitis vinifera* varieties were introduced from Europe and South Africa in the late 18th and early 19th centuries. Some varieties have been bred by Australian viticulturalists, for example Cienna and Tarrango. Although Syrah was originally called Shiraz in Australia and Syrah elsewhere, its dramatic commercial success has led many Syrah producers around the world to label their wine Shiraz.

Australian winemaking results have been impressive and it has established benchmarks for a number of varietals, such as Chardonnay and Shiraz. Moreover, Australians have innovated in canopy management and other viticultural and in wine-making techniques and they have a general attitude toward their work that sets them apart from producers in Europe. Australian wine-makers travel the wine world as highly skilled seasonal workers, relocating to the northern hemisphere during the off-season at home. They are an important resource in the globalization of wine and wine critic Matt Kramer notes that "the most powerful influence in wine today" comes from Australia.

## Wine Regions

The information included on wine labels is strictly regulated. One aspect of this is that the label must not make any false or misleading statements about the source of the grapes. Many names are protected. These are divided into "South Eastern Australia", the state names, zones, regions, and sub-regions. The largest volume of wine is produced from grapes grown in the warm climate Murray-Darling Basin zones of Lower Murray, North Western Victoria and Big Rivers. In general, the higher-value premium wines are made from smaller and cooler-climate regions.

The South Australian wine industry is responsible for most of the production of wine in Australia. In recent years, the Tasmanian wine industry has emerged as a producer of high quality wines. In particular, the Tamar Valley has developed a reputation for its Chardonnay and Pinot Noir, which are well suited to the cooler Tasmanian climate. Queensland is also developing a wine industry with over 100 vineyards registered in the state. Some notable wines are produced in the high-altitude Granite Belt region in the state's extreme south, production is centered on the towns of Stanthorpe and Ballandean.

## South African Wine

### History

The roots of the South African wine industry can be traced to the explorations of the Dutch East India Company which established a supply station in what is now modern day Cape Town. A Dutch surgeon, Jan van Riebeeck, was given the task of managing the station and planting vineyards to produce wines and grapes intended to ward off scurvy amongst sailors during their voyages along the spice route. The first harvest and crushing took place in 1659, seven years after landing in 1652. For much of the 20th century, the wine industry of South Africa received very little attention on the world stage. Its isolation was exacerbated by the boycotts of South African products in protest against the country's system of Apartheid. It was not till the late 1980s and 1990s when Apartheid was ended and the world's export market opened up that South African wines began to experience a renaissance. Many producers in South Africa quickly adopted

new viticultural and winemaking technologies. The presence of flying winemakers from abroad brought international influences and focus on well-known varieties such as Shiraz, Cabernet Sauvignon and Chardonnay.

## Climate and Geography

Inland Mountain chains such as the Hottentots-Holland greatly influences the different macroclimates and *terroir* among South African wine regions.

South Africa is located at the tip of the African continent with most wine regions located near the coastal influences of the Atlantic and Indian Oceans. These regions have mostly a Mediterranean climate that is marked by intense sunlight and dry heat. Winters tend to be cold and wet with potential snowfall at higher elevations.. A strong wind current, known as the Cape Doctor, brings gale force winds to the wine regions along the Cape which has the positive benefit of limiting the risk of various mildew and fungal grape disease as well as tempering humidity but can also damage grape vines that are not protected.

During the harvest months of February and March, the average daily temperatures in many South African wine regions is 73 °F with spikes up to 104 °F not uncommon in the warm inland river valleys around the Breede, Olifants and Orange Rivers. On the Winkler scale the majority of South African wine regions would be classified as Region III locations with heat summation and degree days similar to the California wine region of Oakville in Napa Valley. The wine regions of South Africa are spread out over the Western and Northern Cape regions,

## Wine of Origins

Although the majority of South Africa's wine regions lie in the Western Cape, recent pioneering efforts have included the Eastern Cape and KwaZulu-Natal as wine regions. Drafted in 1973, the "Wine of Origins" (WO) program legislates how wine regions of South Africa are defined and can appear on wine labels. While some aspects of the WO is taking from the French *Appellation d'Origine Contrôlée* (AOC) system, the WO is primarily concerned with accuracy in labeling and does not place any additional regulations on wine regions such as permitted varieties, trellising methods, irrigation and crop yields. Wine regions under the WO system fall under one of four categories-the largest and most generic are Geographical Units (such as the Western Cape region which includes the smaller, but still largely defined Regions (such as Overberg), followed by districts (like Walker Bay) and then finally wards (such as Elgin). The Eastern Cape province is South Africa's most recent wine region. While geographical units, regions and districts are largely defined by political boundaries-wards are the level of origin designation that is most defined by unique *terroir* characteristics.

## Wine regions

Yearly production among South Africa's wine regions is usually around 264 million US gallons which regularly puts the country among the top ten wine producing countries in the world. The majority of wine production in South Africa takes place in the Cape, particularly the southwest corner near the coastal region. The historical heart of South African wine has been the area near the Cape Peninsula and modern day Cape Town. This area is still of prominence in the industry being home to the major wine regions of Constantia, Stellenbosch and Paarl. Today wine is grown throughout the Western Cape and in parts of the Northern Cape, KwaZulu-Natal and Eastern Cape regions. The river regions along the Breede Valley, Olifants and Orange Rivers are among the warmest areas and are often the location of bulk wine production and distillation. The cooler climate regions east of Cape Town along the Indian coast, such as Walker Bay and Elgin, have seen vast expansion and development in recent years as producers experiment with cool climate varieties and wine styles.

## Viticulture

The most common form of trellising found in South Africa is the vertical hedge row system that uses a split cordon supported on a wire kept around 750 millimeters off the ground. The grapevine leaves are trained upright on separate wires that allow plenty of sunshine to reach the grapes but provide enough coverage to keep them from being sunburned. The vines are usually pruned to allow four to five spurs each with two to three buds (potential grape clusters) per cordon. Heat is also a concern come harvest time with some wineries harvesting only at night in the cooler temperatures under floodlights.

The lack of precipitation in many wine regions makes irrigation a necessity. Sprinkler and drip irrigation systems are used to provide anywhere from 7.9–28 inches of extra water a year. Modern winemakers are developing new techniques and an understanding of the role that water stress plays in the development of quality wine grape production.

While ocean winds keep some fungus and mildew threats at bay, downy mildew and powdery mildew (known regionally as "white rust") can pose an occasional threat during the wet winter season. Near harvest time botrytis can also appear, being a hazard or a welcome visitor depending on whether or not botrytized wine production is the goal. Another threat is diseased and virus-infected rootstock. After the phylloxera devastation, vineyards in South Africa were replanted with American rootstock (nowadays most commonly Richter 99 and Richters 101-14).

## Winemaking and wines

Since the end of the 20th century, more South African winemakers have been focused on improving the quality of red wines.

The winemaking traditions of South Africa often represent a hybridization of Old World wine making and the new. Since the end of Apartheid, many producers have been working on producing more "international" styles of wine that can be successful on the world market. Flying winemakers from France, Spain and California have brought new techniques and styles to South Africa. In the 1980s, the use of oak barrels for fermentation and aging became popular. The use of chaptalization is illegal in South Africa as the country's warm climate makes attaining sufficient sugar and alcohol levels for wine production non-problematic. Winemakers more often have problems with low acidity levels which require supplementation with additional acids like tartaric acid.

Today the focus in the South African wine industry has been on increasing the quality of wine production-particularly with the more exportable and fashionable red grape varieties. Traditionally South African red wines had a reputation for being coarse in texture with rustic flavors. The Afrikaans word *dikvoet* used to describe these wines meant literally "thick foot". In the vineyards, growers focused yield control for better ripeness while winemakers used modern techniques to create softer, fleshier wines. Temperature control fermentation as well as controlled malolactic fermentation were more widely used as well as less dependency on filtration as a means of stabilization.

## Cape port-style wine

The South African wine industry has a long history of fortified wine production producing wines known colloquially as "Cape port" (though the term "Port" is protected in the European Union to refer to only the wines from the Douro region of Portugal). These wines are made from a variety of grapes, such as Shiraz and Pinotage, as well as Portuguese varieties like Tinta Barroca, Touriga Nacional, Souzão and Fernão Pires. The minimum alcohol level for these wines must be 16.5-22%.

## Other fortified and dessert wines

In addition to port-style wine, South African wine makers also produce "sherry-style" wines produced in a solera system and a unique *vin de liqueur* made from Muscat known as *Jerepigo* (or *Jerepiko*). With *Jerepigo* the brandy is added to the must prior to fermentation which leaves the wine with a residual sugar (RS) level of at least 160 grams per liter. South Africa's long history of late harvest dessert wines include the modern day *Edel Laat-oes* wines infected with noble rot (known locally as *Edelkeur*) and containing at least 50 grams of residual sugar per liter. Wine labeled simply as *Laat-oes* are from grapes harvested late but not infected with botrytis. These wines must have an alcohol content of at least 10% and residual sugar levels between 10-30 grams per liter. Wines above 30 grams RS maybe called *Spesiale Laat-oes* or "special late harvest" which may imply that some grapes infected with botrytis were used.

## Sparkling wines

Though more producers are turning to Chardonnay and Pinot noir, Chenin Blanc (or Steen as it is also known) is still frequently found in South African sparkling wines. Sparkling wines in South Africa are produced with both the Charmat and the traditional "Champagne Method". To distinguish South African sparkling wines (and to now comply with European Union regulations protecting the term "Champagne" and *champenois*), wines made in this traditional bottled fermented method are labeled as Cap Classique. These wines have been traditionally made using Sauvignon Blanc and Chenin Blanc but in recent years have seen more of the traditional "Champagne grapes" of Chardonnay and Pinot noir being used. Red sparkling wine made from Pinotage can also be found.

## Labeling laws

South African labeling laws focus largely on geographical origins, falling under the purview of the "Wine of Origin" legislation. Single vineyard designated wine can be produced, provided that the vineyard is registered with the government and all the grapes used in the production of the wine was grown in that vineyard. While the term "estate"

no longer qualifies as a designation of geographic origins, wineries can still label "estate wines" provided that all the grapes were grown and the wine vinified and bottled on the same property. The South African Wine & Spirit Board operates a voluntary program that allows South African wines to be "certified" for quality and accuracy in labeling. Under this certification process, vintage dated wine must be composed of at least 85% grapes that were harvested that vintage year. Varietal wines must also be composed of at least 85% of the listed varietal. Blends, such as a Cabernet Sauvignon and Pinotage blend, can have both varietals listed on the label provided that the two wines were vinified separately. A wine that has been "co-fermented", with both grapes crushed and vinified together such as a Shiraz-Viognier, cannot list both varietals. As of 2006, about 35% of Cape wineries participated in this voluntary program.

## Grape varieties

Grape varieties in South Africa are known as *cultivar*, with many common international varieties developing local synonyms that still have a strong tradition of use. These include Chenin Blanc (Steen), Riesling (until recently known locally as Weisser Riesling), Crouchen (known as Cape Riesling), Palomino (the grape of the Spanish wine Sherry known locally as "White French"), Trebbiano (Ugni Blanc), Sémillon (Groendruif) and Muscat of Alexandria (Hanepoot). However, wines that are often exported overseas will usually have the more internationally recognized name appear on the wine label. From the 1990s, plantings of red grape varieties rose steadily. In the late 1990s, less than 18% of all the grapes grown in South Africa were red. By 2009 that number had risen to 44%. For most of the 21st century, the high yielding Cinsaut was the most widely planted red grape variety but the shift in focus to quality wine production has saw plantings of the grape steadily decline to where it represented just 2% of all South Africa vineyards in 2009. In its place Cabernet Sauvignon, Shiraz and Pinotage have risen to prominence with Cabernet Sauvignon being the most widely grown red grape variety covering 12% of all plantings in 2009. Other red grape varieties found in South Africa include Carignan, Gamay (often made in the style of Beaujolais wine with carbonic maceration), Grenache, Pontac, Ruby Cabernet, Tinta Barroca and Zinfandel

## South America Wines

South America may not be the first place you think of when considering wine, but the continent produces some great varietals in many areas. Here is a look at the wine regions of Chile and Argentina.

### Chile

Chile's climate and environment are ideal for growing grapes due to warm temperatures, fertile soil and its location between mountains and the ocean. The major wine regions include Aconcagua, to the north, Chile's warmest region; Panquehue, the intermediate region and Casablanca, a cooler region near the coast.

Chile's Central Valley produces much of the country's wine and has four sub regions: Maipo, Rapel, Curico and Maule Valleys. Rivers run through each area from the Andes to the ocean and the vineyards are located on a plateau adjacent to two mountain ranges.

Notable Chilean varietals include:

- Cabernet Sauvignon: big, bold, complex reds with black currant intensity
- Merlot (Carmenère): youthful to complex, robust, earthy and smoky
- Pinot Noir: Sweet, silky, smooth, with hints of berries
- Sauvignon Blanc: refreshing and zesty with hints of fruit and citrus
- Chardonnay: rich with tropical fruit and citrus notes

### Argentina

Argentina, like Chile, has a very favorable climate for growing grapes and is one of the top wine producing countries in the world. Vineyards are located at different elevations but the overall climate is warm and arid with limited rainfall. Most of Argentina's wine is produced in the western part of the country in the areas of Mendoza, San Juan and La Rioja. Mendoza is the country's leading wine producer, with Malbec emerging as the region's most popular varietal in recent years. San Juan is the second highest wine producing region in Argentina, producing Syrah, Charbono (or Bonarda to the locals), sherry style wines, brandies and vermouth.

Notable Argentinean varietals include:

- Malbec: full-bodied, mild grape with low acidity, moderate tannins, dried fruit and plums.
- Cabernet Sauvignon: big and bold with notes of spices, berries and maybe even green peppers.
- Merlot: smooth, well-balanced, fruity or oaky.
- Torrontés: fresh and light with big bouquets of floral aromas and tropical fruit.
- Chardonnay: Argentina's chardonnay can be light and fruity or more complex.
- Sauvignon Blanc: can have herbal or citrus notes and some smokiness.

## American Wine

American wine has been produced for over 300 years. Today, wine production is undertaken in all fifty states, with California producing 89 percent of all US wine. The United States is the fourth largest wine producing country in the world after France, Italy, and Spain.

The North American continent is home to several native species of grape, including *Vitis labrusca*, *Vitis riparia*, *Vitis rotundifolia*, *Vitis vulpina*, and *Vitis amurensis*, but it was the introduction of the European *Vitis vinifera* by European settlers that led to the growth of the wine making industry. With more than 1,100,000 acres under vine, the United States is the fifth most planted country in the world after France, Italy, Spain and Turkey.

## History

The first Europeans to explore North America called it Vinland because of the profusion of grape vines they found. The earliest wine made in what is now the United States was from the Scuppernong grapes by French Huguenot settlers at a settlement near Jacksonville, Florida between 1562 and 1564. In the early American colonies of Virginia and the Carolinas, wine making was an official goal laid out in their founding charters. However, settlers would later discover that the wine made from the various native grapes had flavors which were unfamiliar and which they did not like. This led to repeated efforts to grow familiar *Vitis vinifera* varieties beginning with the Virginia Company exporting of French vinifera vines with French vigneron to Virginia in 1619. These early plantings were met with failure as native pest and vine disease ravaged the vineyards. In 1683, William Penn planted a vineyard of French vinifera in Pennsylvania that may have interbred with a native *Vitis labrusca* vine to create the hybrid grape Alexander. One of the first commercial wineries in the United States was founded in Indiana in 1806 with production of wine made from the Alexander grape. Today French-American hybrid grapes are the staples of wine production on the East Coast of the United States.

The first commercial vineyard and winery in the United States was established by an act of the Kentucky Legislature on November 21, 1799. The vinedresser for the vineyard was John James Dufour formerly of Vevey, Switzerland. The vineyard was located overlooking the Kentucky River in Jessamine County, Kentucky and was named First Vineyard by Dufour on November 5, 1798. The vineyard's current address is 5800 Sugar Creek Pike, Nicholasville, Kentucky. The first wine from the First Vineyard was consumed by the subscribers at John Postelthwaite's house on March 21, 1803. Two 5 gallon oak casks of wine were taken to President Thomas Jefferson in Washington, D.C. in February 1805. The vineyard continued until 1809 when a killing freeze in May destroyed the crop and many vines at the First Vineyard. The Dufour family then relocated to Vevey, Indiana after the abandonment of the First Vineyard.

In California, the first vineyard and winery was established by the Franciscan missionary Junípero Serra near San Diego in 1769. Later missionaries would carry the vines northward, with Sonoma's first vineyard being planted around 1805. California has two native grape varieties, but they make very poor quality wine. Therefore, the missionaries used the Mission grape, which is called *criolla* or "colonialized European" in South America. Although a *Vitis vinifera* variety, it is a grape of "very modest" quality. Jean-Louis Vignes was one of the early settlers to use higher quality vinifera in his vineyard near Los Angeles.

The first commercially successful winery in the United States was founded in Cincinnati, Ohio in the mid-1830s by Nicholas Longworth, who made a sparkling wine from Catawba grapes. In the 1860s, vineyards in the Ohio River Valley were attacked by Black rot. This prompted several winemakers to move north to the Finger Lakes region of New York. During this time, the Missouri wine industry, centered around the German colony in Hermann, Missouri, took off and was soon second to California in wine production. In the late 19th century, the phylloxera epidemic in the West and Pierce's disease in the East ravaged the growing American wine industry.

Prohibition in the United States began when the state of Maine became the first state to go completely dry in 1846; it culminated in the passing of the Eighteenth Amendment to the United States Constitution in 1920 which forbade the

manufacturing, sale and transport of alcohol. Exceptions were made for sacramental wine used for religious purposes and some wineries were able to maintain their facilities under those auspices. Others resorted to bootlegging. Home winemaking also became common, allowed through exemptions for sacramental wines and production for home use. Following the repeal of Prohibition, American wine making reemerged in very poor condition. Many talented winemakers had died, vineyards had been neglected or replanted with table grapes, and Prohibition had changed Americans' taste in wines. Consumers now demanded cheap "jug wine" (so-called dago red) and sweet, fortified (high alcohol) wine. Before Prohibition dry table wines outsold sweet wines by three to one, but afterwards the ratio was more than reversed. In 1935, 81% of California's production was sweet wines.

Leading the way to new methods was research conducted at the University of California, Davis and some of the state universities in New York. Faculty at the universities published reports on which varieties of grapes grew best in which regions, held seminars on winemaking techniques, consulted with grape growers and winemakers, offered academic degrees in viticulture, and promoted the production of quality wines. In the 1970s and 1980s, success by Californian winemakers helped to secure foreign investment dollars from other winemaking regions, most notably the Champenois. Changing taste in the American palate has also helped to foster this growth, with 668 million gallons) of wine being consumed in the United States in 2004. Today the American wine industry faces the growing challenges of expanding international exports and dealing with domestic regulations on interstate sales and shipment of wine.

## **Wine regions**

There are nearly 3,000 commercial vineyards in the United States, and at least one winery in each of the 50 states.

- West Coast – The majority of American wine production occurs in the states of California, Washington and Oregon.
- Rocky Mountain Region – Notably Idaho and Colorado
- Southwestern United States – Notably Texas and New Mexico
- Midwestern United States – Notably Missouri, Illinois and Minnesota
- Great Lakes region – Notably Michigan, northern New York and Ohio
- East Coast of the United States – Most Notably Virginia and notables such as New Jersey, New York State, Pennsylvania, and North Carolina.

## **Appellation system AVA**

AVA is an American system implemented in the late 1970s, with purpose of appellation and classifying U.S. wines in fashion similar to other countries. Unlike other systems, the AVA is considered very lenient. An AVA classification is defined strictly by a geographic area. The key requirement for wine with an AVA designation on the label is that 85% of the grapes must be grown in that designated viticulture area.

## **AVA Process**

Applicant Growers must petition the Tax and Trade Bureau to obtain an AVA designation for a region. The Bureau's decision is based on the areas topography, soil type, climate, elevation and to some extent historical precedent. ATF may set standards to identify the wine, but they do not grade or regulate quality. When the agency declares an area an AVA, it is only stating that the petitioners proved all they need to prove in accordance with their regulations. ATF can't grade quality levels for wine like our government does with meat, or veal, because they're really not legally authorized to do so.

Petitions for the establishment or modifications of AVA classifications go through a lengthy review process. The petition process can take years, and with the documentation and specialist required can range from \$10,000 to \$20,000 thousand and higher.

## **Appellation labeling laws**

In order to have an AVA appear on a wine label, at least 85% of the grapes used to produce the wine must be grown in the AVA.

With the larger state and county appellations the laws vary depending on the area. For a County Appellation, 75% of the grapes used must be from that county. If grapes are from two or three contiguous counties, a label can have a multi-county designation so long as the percentages used from each county are clearly on the label. For the majority of U.S.

States the State Appellation requires 75% of the grapes in the wine to be grown in the state. Texas requires 85% and California requires 100%. If grapes are from two to three contiguous states a wine can be made under a multi-state designations following the same requirements as the multi-county appellation.

### **Other U.S. labeling laws**

In the United States, at least 95% of grapes must be from a particular vintage for that year to appear on the label. Prior to the early 1970s, all grapes had to be from the vintage year. All labels must list the alcohol content based on percentage by volume. For bottles labeled by varietal at least 75% of the grape must be of the varietal. In Oregon, the requirement is 90%. American wine labels are also required to list if they contain sulfites and carry the Surgeon General's warning about alcohol consumption.

The information in the Wine Facts section of the catalog was sourced from Wikipedia.com.