

ROBERSON WINE SCHOOL



INTRODUCTION TO THE WORLD OF WINE  
THE WHAT? AND WHERE? OF WINE

WEDNESDAY 22nd JUNE 2011

# INTRODUCTION TO THE WORLD OF WINE PART ONE

## HOW TO TASTE WINE

### WHAT IS WINE?

What separates wine from all other beverages is the meaning and importance that we attach to it. No other drink resonates with people on so many levels and very few products express their provenance in such a detailed way. Whether it be for religious, social, cultural or even health reasons, wine is an intrinsic part of life all over the world for people from a multitude of backgrounds. It is an accompaniment to food, a drug, a refreshing drink, a status symbol, an investment, a commodity. It is many things to many people, but the combination of a sense of place and time is its unique trick and the overwhelming source of its fascination.

On a basic level, wine = grape juice with the sugar fermented into alcohol but of course it isn't just grapes that can be used to make wine. Many a grandparent has spent hours in the garden shed toiling over home-made elderflower wine while this year's London Wine Fair saw the launch of a range of Pomegranate wines by a British winery. It is no coincidence, however, that of all the raw materials available to the budding winemaker it is grapes that have established themselves as the fruit of choice. For a start, the grape vine is one of the few plants that thrives in non-fertile soils making it an ideal choice for farmers in climates where fruit and vegetables are difficult to grow. The main reason though, is the sheer range of different 'breeds' in the grape family and the resulting diversity that they give the finished product. It is this that gives the wine enthusiast so many styles to choose from, not to mention so much to learn and talk about!

As far as winemaking goes the four main constituents of a grape are the stalk, the skin, the pulp and the pips:

- Sugar (and therefore alcohol) as well as Acidity come from the pulp
- Tannins come from the stalk, pips and skins
- Colour comes from the skin
- Flavours come mainly from the skin but also from the pulp

Each grape variety has got its own identity and characteristics and even though they pretty much all look the same to the naked eye, they are all different. They can have more or less pulp, thinner or thicker skins, bigger or smaller pips, the possibilities are endless and it is thanks to these minute differences that we are able to enjoy such a diverse range of wines from all over the world. This is why it is so important for winemaking countries to fight for the survival of their native grapes because it is those native grapes that make the world of wine such a fascinating subject. I have absolutely no interest in trying a Merlot or Cabernet Sauvignon from Austria for instance, but you can bring me a glass of Blaufrankish any time of the day!

As you can see this is a matter I feel passionate about and I cannot emphasize enough how important it is for you to keep an open mind and be adventurous in your choices. Sticking to the same grape variety week in week out is a bit like watching the same movie over and over again.

### HOW DO YOU TASTE WINE?

Regardless of whether the wine you are drinking is red, white or rosé, cheap or expensive, the first step to understanding it is learning how to taste it. This involves swirling it around in your glass, swishing it round in your mouth and, if you are driving home or have 200 more samples to taste, spitting it out. All this will result in a better understanding of a wine's characteristics, and give you a much better idea of whether it is likely to improve and develop in bottle.

The key to evaluating wine is analysing three areas: the appearance, the aroma and the flavour. When these have been addressed it is possible to make an assessment of the overall quality of the wine (and perhaps even take a guess at what it is). This assessment will be based on the balance between four important elements: Alcohol – Tannin – Sugar – Acidity.

All four of these are essential parts of any wine, but if one (or more) is out of sync with the others then it becomes noticeable that the wine is not harmonious and is therefore unlikely to improve. While it is not unusual of for wines to shake off certain negative aspects of their youth (sulphurous notes or aggressive oak flavours) as they age, problems with the balance of the four fundamental elements are more likely to get worse than better.

# PART ONE INTRODUCTION TO THE WORLD OF WINE

## HOW TO TASTE WINE

### STAGE ONE THE EYE

What does the appearance tell you?

- Grape variety
- Age of the wine
- Viticultural and winemaking techniques
- Wine's origin

Pour a couple of inches into a decent wine glass, tilt the glass away from you at a 45° angle and hold it up in front of you, preferably against a white background. What we are looking for here is colour - red wines will vary from light red to dark purple; whites will range from a watery translucence, through yellow to a deep golden colour; even rosé wines can vary, some showing a light blush, while others are the more typical pink colour.

Think of the colour of a wine as a set of clues about its age, identity, winemaking and origin. Of the many factors influencing a wine's robe, its constituent grape variety is probably the most important: for instance Pinot noir or Nebbiolo tend to yield wines with a paler colour than Cabernet Sauvignon or Sangiovese. The wine's origin is also very important as wines from cooler climates tend to be lighter in tone while the hotter regions often produce the more ominous looking full-bodied blockbusters. The age of a wine is another important criterion to take into account when assessing its appearance and one should bear in mind that white and red wines react differently to the process of ageing. White wines become darker and the most age worthy examples such as Sauternes or Tokay can turn the colour of Coca-Cola, reds on the other hand shed colour as time passes and their deep youthfulness slowly changes into varying shades of garnet. And to confuse things further throw a few winemaking techniques in the equation. Oak ageing for instance infuses white wines with a more golden hue and extended maceration for red wines help extract more colour from the grape skins producing wines of much darker colour.

You might also have heard or read about legs or tears, they refer to the the amount of glycerol in a wine. After swirling the wine, some of them cling to the glass while some others appear thinner and less viscous. This gives you an idea about the alcohol level or sugar content of the wine, the more viscous the higher the alcohol or sugar content.

As you can see, by the end of your assessment you are left with more questions than answers: What grape could it be? Is it new world or old world? How old is it? And that's the way it should be as these are clues only that you will try to refute or validate when assessing the nose and palate of the wine.

### STAGE TWO THE NOSE

Basic steps to nosing a wine:

- Swirl it and sniff it!

Give the glass a good swirl and get the liquid moving. Is all this swirling really necessary? The answer is yes, as swishing the wine around releases the all important aroma compounds that make up the 'nose' or 'bouquet'. Aroma compounds are volatile and the only way to release them is to bring them in contact with oxygen. With food for instance, the aromas become much more intense when heated through cooking because they are released by the vapours travelling through the food. By swirling the wine in the glass, the surface of wine directly in contact with air is increased and the number of molecules liberated by the wine augments proportionally.

Now that your glass is packed full of the wine's aromas take a good healthy inhalation. About 70% of what we taste is obtained from our sense of smell, and almost every glass of wine should throw up a number of different aromas. Many of these scents will be indicative of a certain variety; the red fruits of Pinot Noir, black fruits of Cabernet Sauvignon, the pepper in Shiraz, or the gooseberries of Sauvignon Blanc. Some of them will stand out to certain people, while they pass others by; chocolate, asparagus, mint, vanilla. The more wine you smell, the more you will recognise familiar aromas that will give away details about the wine in front of you.

But what if despite all the swirling and sniffing you still can't smell much? Well don't worry, there's nothing necessarily wrong with your nose, nor your swirling or sniffing technique. Certain grape varieties such as Garganega or Grenache Blanc are famous for being quite discreet (even austere) whereas some others are so powerfully aromatic that you feel as if the wine's jumping out of the glass to grab you by the neck. Non-aromatic varieties usually rely on other qualities to seduce you and the absence of intense aroma is not a fault but the expression of the grape variety.

The aromas of a wine are classified in three categories: primary, secondary and tertiary. Primary aromas refer to those coming from the grape itself: the red fruits of Pinot noir, the blackberry or blackcurrant of Cabernet Sauvignon, the gooseberry of Sauvignon Blanc or white pepper of Gruner Veltliner. Secondary aromas are those derived from fermentation and oak ageing: the creamy-buttery aromas often found in white burgundy come from the malolactic fermentation whereas aromas such as vanilla and toast usually come from new oak ageing. Tertiary aromas are those developed as the wine matures in the bottle: Pinot Noir for instance develops gamey-farmyardy notes as it ages whereas Cabernet Sauvignon becomes quite leathery and old Riesling often displays aromas which can be best described as kerosene or petrol.

# INTRODUCTION TO THE WORLD OF WINE PART ONE

## HOW TO TASTE WINE

### STAGE THREE THE PALATE

To assess the palate the taster analyzes:

- The structure of the wine
- The flavour profile
- Concentration
- Complexity
- Finish
- Balance

When tasting a wine the objective is twofold, first we want to analyse the structure of the wine and second its flavour characteristics. One very important point to make here is that, unlike what we think, our palate is incapable of recognising any flavour, it is through its aromas that wine is actually tasted.

The human tongue is limited to the detection of the primary tastes acidity, bitterness, saltiness and sweetness. While all the cells in our tongue can detect the four basic tastes certain parts are more sensitive to certain tastes than others. The tip of the tongue is the most sensitive to sweetness, the base to bitterness, the edges to sour taste and salt is perceived equally on all of the tongue's perimeter.

We can sense flavour only as an aroma because our flavour sensitive nerve cells are concentrated in the olfactory area at the top of our nose and the only way of getting molecules up there is as a vapour. When we eat or drink, flavours evaporate off our tongue and are directed towards the back of our mouth and up in the direction of the olfactory bulb where we can actually detect them. This is why everything tastes the same when we have a cold. The wide array of fruit, earthy, floral, herbal, mineral and woody flavours perceived in wine are derived from aroma notes interpreted by the olfactory bulb.

Now we'll take you through the different steps. Take a good sip, and move it around your mouth. Roll it over and under your tongue and get it exposed to as much of your mouth's surface as possible. The aim here is to analyse the main structural components of the wine: body, acidity, alcohol and tannin. Think of body as the way the wine feels on the palate, does it feel more like milk or water? Milk is full bodied, water light bodied. Acidity is what makes you salivate after swallowing the wine. After swallowing or spitting the wine tip your head down and keep your mouth slightly open, if you are salivating so much that you struggle to keep it in then the acidity is high. Alcohol is felt through a burning sensation at the back of the throat, if you notice it then the alcohol is medium to high, if you don't it's low. Tannins are mainly only present in red wine and it's what sticks your lips to your gums when you drink a bottle of Barolo or Cabernet-Sauvignon. If you want to experience their full power suck on a tea bag, there's no better way! Now get some air in there. This is when the slurping noises start, but it is important, as the oxygen highlights the different characteristics and bring those flavour compounds from your mouth to your nose.

In order to assess quality, we are looking at the balance of the wine, which is reflected in the interaction between tannin, alcohol, acidity & sugar. If one of these elements overshadows the others, it could mean a number of things, but what we are looking for is a harmony between these elements that will provide a pleasant mouthfeel. This is subjective to a certain extent—some people prefer the fruity sweetness of some wines over the full bodied tannic structure of others, but without some degree of balance between the constituencies it is unlikely to improve and develop with age.

After the wine is spat or swallowed another key element of the tasting process comes into play – the 'finish'. Again, balance is key, but we are also looking for length and smoothness of finish. A wine that leaves a long, pleasant and lingering taste in the mouth is one that promises to develop into an even better wine, whereas a short and abrupt finish implies that the wine is of inferior quality and unlikely to improve.

## WHAT CAN YOU SMELL / TASTE?

In an attempt to codify and standardise the descriptions of what we taste and smell in a sip of wine, Anne Noble of the University of California developed something called the 'Aroma Wheel'. This is perhaps the most successful in a long line of attempts to establish a common approach to the language of wine. There is a finite number of flavour and aroma compounds that can be detected by humans (science currently has the number at around 10,000), so the ones that are present in grapes and the wine produced from them are also found in various other things like foodstuffs, flowers, spices etc.

Being able to recognise and describe them depends on the taster's memory, experience and ability to associate what is in their glass with something they have encountered before, but even then there is the need for a vocabulary that can communicate this tasting experience to other people. Obviously what we can smell and taste is a highly personal matter that is subjective to a large extent, but there will always be occasions where we just can't put our finger on that elusive descriptor. That's when the 'Aroma Wheel' comes in handy.

# INTRODUCTION TO THE WORLD OF WINE PART ONE

## MAJOR WHITE GRAPES

### MAJOR WHITE GRAPES

- Chardonnay
- Sauvignon Blanc
- Viognier
- Riesling
- Chenin Blanc
- Pinot Gris / Pinot Grigio
- Albarino

#### CHARDONNAY

Structure	Medium to full-bodied, pale to golden, medium to high acidity and medium to high alcohol.
Favour profile	Chardonnay is one of the most planted white varieties and therefore comes in a wide range of style from the austere, apple chalkiness of a Chablis to the exotic exuberance of a Californian Chardonnay.
Notes	Chardonnay is subject to all sort of winemaking treatments such as malo-lactic fermentation, lees steering, oak ageing. As a result the wines can display a wide array of secondary flavours induced by these different techniques: butter, vanilla, coffee, toast, hazelnut, biscuit... The best wines can age for up to 30 years but most should be drunk within 3 years of bottling. It is also one of the major grapes used to make champagne.
Premium Regions	Burgundy, Champagne, Sonoma, Walker Bay, Willamette Valley...

*If you like Chardonnay you might also like Gruner Veltliner, Viognier...*

#### SAUVIGNON BLANC

Structure	Light to medium-bodied, pale colour, high acidity and moderate alcohol.
Flavour profile	It is as clean and fresh as it gets, the flavours range from the discreet green fruit, citric, floral and grassy flavours of the Northern hemisphere to the full pungent and exotic passion fruit of Marlborough.
Notes	They are mostly unoaked but it is possible to find some barrel aged examples, they are generally fuller bodied and much richer in style. It is sometimes blended with Semillon which brings a bit of weight and texture to the blend. The younger the better, its charm lies in its youthful crispiness.
Premium Regions	Loire Valley, Bordeaux, New Zealand, Groenekloof, Elgin...

*If you like Sauvignon Blanc you might also like Chenin Blanc, Riesling, Albarino...*

#### VIOGNIER

Structure	Full-bodied, low acidity, medium to deep colour and high alcohol.
Flavour profile	It is an aromatic variety bursting with flavours of white flowers, peach, apricot and orange rind.
Notes	Some examples are oaked but care must be taken so that the oak doesn't overshadow Viognier's delicate flavours.
Premium Regions	Condrieu, Eden Valley

*If you like viognier you might also like Muscat, Torrontes, Albarino, Roussanne...*

# PART ONE INTRODUCTION TO THE WORLD OF WINE

## MAJOR WHITE GRAPES

### RIESLING

Structure	Light to medium bodied, high acidity, light colour and moderate alcohol.
Flavour profile	Clean, fresh, racy and incredibly complex Riesling is a grape that deserves far more credit than it gets. The delicate citric and floral flavour of its youthfulness slowly change into a richer spectrum of toast and kerosene.
Notes	The aim there is to obstruct as little as possible during the wine making. Anyone crazy enough to obstruct with the purity of Riesling by using new oak should stop right now and change career. Old oak foudres (1000L+ barrels) are a common sight in Riesling Country but they don't impart any flavour to the wine. German style Rieslings are usually slightly sweet but modern examples are usually dry nowadays. Suitable for the production of late-harvest and botrytized stickies.
Premium Regions	Germany (Mosel, Rheingau, Nahe...), Alsace, Austria, Clare Valley, Eden Valley... <i>If you like Riesling you might also like Sauvignon Blanc, Chenin Blanc, Semillon...</i>

### CHENIN BLANC

Structure	Medium to full-bodied, high acidity, light colour and moderate alcohol.
Flavour profile	Chenin Blanc is probably the most versatile grape in the world, it comes in all styles: sparkling, bone dry, off-dry and sweet. The aroma profile ranges from the delicate floral, apple quincy character to the riper exotic flavour present in the wine from South Africa or botrytized examples.
Notes	Chenin Blanc in the Loire Valley makes some of the longest lived white wines in the world, the sweet ones can age for as much as 80+ years.
Premium Regions	Loire Valley (Vouvray, Savennieres, Coteaux du Layon, Quarts de Chaumes...), South Africa. <i>If you like Chenin Blanc, you might also like Riesling, Gruner Veltliner, Semillon, Sauvignon Blanc, Garganega..</i>

### PINOT GRIS / PINOT GRIGIO

Structure	Light to full-bodied, low to medium acidity, medium colour and low to medium alcohol.
Flavour profile	It can go from semi-aromatic with aromas of white flower, pear and citrus to rather discreet or even neutral as in the cheapest Pinot Grigios from Italy with pear drop and lemon aromas
Notes	Pinot Gris on a label usually refers to a fuller style rich and oily on the palate but never to marked on the flavour profile whereas Pinot Grigio refers to an early-harvested style where the emphasis is on the freshness and the resulting wine light and crisp. <i>If you like Pinot Gris you might also like Pinot Blanc, Gruner Veltliner</i> <i>If you like Pinot Grigio you might also like Vermentino, Semillon, Trebbiano, Pinot Blanc, Garganega...</i>

### ALBARINO

Structure	Light to medium-bodied, high acidity, medium colour and medium to high alcohol.
Flavour profile	Beautifully crisp, Albarino bursts with flavours of apple, citrus, peach and apricot and can also often exhibit more subtle aromas such as fennel and minerals.
Notes	Often blended with grapes such as Loureiro in the northern Vinho Verde region of Portugal, it is mostly unblended in Galicia. It is the perfect accompaniment to Sea Bass or any kind of seafood.
Premium Regions	Galicia and Vinho Verde <i>If you like Albarino you might also like Sauvignon Blanc, Viognier, Marsanne, Roussanne...</i>

# INTRODUCTION TO THE WORLD OF WINE PART ONE

## MAJOR RED GRAPES

### MAJOR RED GRAPES

- Cabernet Sauvignon
- Merlot
- Pinot Noir
- Syrah / Shiraz
- Grenache
- Malbec
- Tempranillo

#### CABERNET SAUVIGNON

Structure	Full bodied and deeply coloured with high acidity, chunky tannins medium to high alcohol, the finest examples can age for many years.
Flavour profile	Black fruit flavours: Blackcurrant, blackberry and mulberry, develops complex bouquet as it ages with notes of cedar, cigar box and leather.
Notes	Oak ageing is a common practice especially for the best examples. It is often blended with Merlot and Cabernet Franc for Bordeaux blends all over the world but also with Shiraz in Australia or Malbec in Argentina.
Premium Regions	Bordeaux, Napa Valley, Coonawara, Bolgheri, Stellenbosch...

*If you like Cabernet Sauvignon you might also like Sangiovese, Aglianico, Tempranillo, Tannat, Syrah, Nebbiolo...*

#### MERLOT

Structure	Medium to full bodied and deeply coloured with medium acidity, soft tannins and medium to high alcohol.
Flavour profile	It ranges from delicate red fruit (raspberry, plums) for early harvested cool climate examples to much richer darker plummy baked fruit almost chocolatey when grown in hotter climate.
Notes	It is the perfect blending partner to the austere Cabernet Sauvignon in Bordeaux where it brings a softness and silkiness to the palate. Oak ageing is common practice and the best examples can age for up to 10-15 years.
Premium Regions	Bordeaux (St-Emilion & Pomerol), Tuscany, Napa Valley, Stellenbosch, Mendoza, Columbia Valley (Washington State)...

*If you like Merlot you might also like Carmenere, Malbec, Barbera*

#### PINOT NOIR

Structure	Light to medium bodied and lightly coloured with high acidity, light tannins and moderate alcohol.
Flavour profile	Dominated by delicate red fruits such as strawberry, raspberry, cherry or redcurrant, the best examples can develop an aromatic complexity unparalleled by other grapes: rose petals, violets, mushroom, earthy...
Notes	Only the very best can be aged in new oak, the finest wines can age for 20+ years. It is also one of the major grapes used to make champagne.
Premium Regions	Burgundy, Champagne, Oregon, Martinborough, Sonoma, Walker Bay...

*If you like Pinot Noir you might also like Gamay, Dolcetto, Barbera, Blaufrankish...*

#### SYRAH / SHIRAZ

Structure	Medium to full bodied and deeply coloured with high acidity, high tannins and medium to high alcohol.
Flavour profile	It ranges from redcurrants, raspberry, plum with white pepper and spice in cooler climates to full on dark fruited blockbusters with a hefty dose of spice, pepper and cloves.
Notes	Syrah and Shiraz are one and the same but the former relates to the more elegant and restrained examples whereas the latter refers to the massive blockbusters produced in Australia and other New World countries. Even though the blending of Syrah with Viognier originated from the Cote-Rotie, the practice is now much more common in Australia. Very high quality and ageing potential (20+ years) for the very best wines. Oak ageing is common practice.
Premium Regions	Northern Rhone, Barossa Valley, Heathcote Road, Sonoma, Napa Valley...

# PART ONE INTRODUCTION TO THE WORLD OF WINE

## MAJOR RED GRAPES

### **GRENACHE / GARNACHA**

Structure	Full-bodied, medium to deeply coloured, medium to high acidity, soft tannins and high alcohol.
Flavour profile	Red fruits: strawberry, raspberry and plums with pepper and spice, it can also show a baked fruit character.
Notes	It is often blended with Syrah and Mourvedre as part of GSM blends. If oak is used it tends to be old as new oak flavours tend to easily overshadow the Grenache character. Potential for ageing and quality can be quite high especially from old vines.
Premium Regions	Southern Rhone, Priorat, Rioja, Southern Australia

*If you like Grenache you might also like Mourvedre, Nero d'Avola, Merlot, Valpolicella Ripasso and Amarone...*

### **MALBEC a.k.a Cot and Auxerrois**

Structure	Full-bodied and deeply coloured, medium acidity, big soft tannins and medium to high alcohol.
Favour profile	These are big wines and the best example are filled with soft and ripe plummy fruits and liquorice. They can be a lot more austere and restrained when grown in France.
Notes	Malbec's popularity was decreasing on its home-soil in France but it has known a bit of a revival since Argentina adopted it as its flagship variety. It takes well to oak-ageing and the best examples can age well for 10+ years.
Premium Regions	Mendoza, Cahors.

*If you like Malbec you might also like Aglianico, Merlot, Carmenere, Tannat*

### **TEMPRANILLO a.k.a Tinta Roriz, Tinto de la Rioja, Tinta del Pais, Tinto Aragónes, and Tinta de Toro...**

Structure	Medium to full-bodied and deeply coloured, medium acidity, medium to high level of tannins and medium to high alcohol.
Favour profile	The wines made of Tempranillo can vary widely in style and the typical red fruit found in traditional Rioja can quickly turn into richer black fruit characters in regions such as Toro or Ribera del Duero.
Notes	Often blended with Garnacha, Graciano and Mazuelo on its homesoil in Rioja, the wines of Toro and Ribera del Duero are mostly unblended. The best wines can age for 20+ years and develop a compelling leathery-savoury sometimes spicy character.
Premium Regions	Rioja, Ribera del Duero, Toro, Douro, Argentina

*If you like Tempranillo you might also like Cabernet Sauvignon, Merlot, Aglianico, Grenache blends*

# INTRODUCTION TO THE WORLD OF WINE

## PART TWO: THE WHERE? OF WINE

### TERROIR

One of the things that separates the wine enthusiast from the casual drinker is the importance given to the details of a wine's origin, often discussed in terms of its 'terroir'. A French word that has no direct translation into English, terroir has been described as the 'location, location, location' of wine or a sense of 'somewhereness' - The stamp of individuality that is given to a product by the uniqueness of its provenance.

When I was first getting into wine, I was fascinated by the idea that if presented with two bottles that looked the same, cost the same and came from the same grape variety, I would usually prefer one of them to the other. Why this might be turned me from someone that enjoyed drinking wine into someone that started thinking about wine. A large part of the answer turned out to be terroir. Terroir refers to the total natural environment of the vineyard habitat: the soil, the landscape and the climate. These different factors combine and interact to give each vineyard its unique terroir which stamps the wines with its indelible footprint. Essentially we are talking about the specific characteristics of the land and microclimate that mark a given site or region as unique.

Before we look more into details at the physical aspects of terroir, I'd like to take a stab at explaining the philosophy behind it. Terroir in France is much more than the environmental properties of a vineyard, it's almost a religion. The Larousse French dictionary gives the following definition: "A total land area, viewed from the perspective of its agricultural potential and producing one or more typical products, such as wine for instance". An interesting point here is that wine is only one of many products that can reflect terroir. Cheese, charcuterie and even vegetables are able to express the details of their terroir. French people are very proud of their agricultural products and have always attached an almost God-like reverence to their land - after all, it is what gives their produce its inimitable personality.

### SOIL

One of the most important things to understand is that good wine cannot be made from vines growing in fertile soil. Give them the best conditions ever and they'll become lazy, eating and drinking all the nutrients and water they can lay their roots on, producing a huge amount of leaves and swollen diluted fruit. The ideal scenario is a moderately fertile soil with limited supply of water and nutrients so that the vine has to work hard and is put under stress. As it doesn't enjoy these stressful conditions, the plant will focus all of its energy on using its roots to dig deep in the search for premium nutrition and hydration. As a result, the vine's internal circuits will be working flat out and it will produce smaller quantities of the sweetest fruit possible, in the hope that birds and other animals will come and eat the grapes and deposit the seeds in a better place.

One of the most important physical characteristics of the soil is the way it supplies water to the vine. Effective drainage is of the utmost importance, the ideal soil being easy draining but with good water-holding capacity and thus able to provide the vine with a steady but moderate supply of water. Combined with just enough intake of nutrients this will result in growth being restrained, berries being smaller and more concentrated in terms of flavours, sugars and acids. Well drained soils also tend to be warmer, and this residual heat can be a serious advantage when growing grapes in a cool climate.

## PART TWO INTRODUCTION TO THE WORLD OF WINE

The color of the soil has also a part to play as it can either reflect or absorb heat which depending on the location, can be an advantage or not. Stones and rocks in the soil or on its surface have a similar impact on the vine as they store heat during the day and release it at night, further helping the grapes to reach full ripeness. The most famous stones are probably the galets of Chateauneuf du Papes but they are just one example of the importance of stones in the vineyard. Without the slates, quartz or shales dotting the soil of the best vineyards in Germany, Riesling would never reach the same mineral-laden heights, and without the famous Médoc gravel to help the drainage in Bordeaux's best sites the likes of Lafite and Latour would never be so complex.

### CLIMATE

Climate obviously has a massive impact on vines and will play a big part in the style of wine produced, as it provides the vine with warmth, sunlight and water, the three pillars of photosynthesis. Photosynthesis is the process by which the plant uses the light as a source of energy to combine carbon dioxide from the air with water taken up from the soil to form sugar in grapes. Sunlight allows this process to take place and has a direct impact on wine quality as it regulates the amount of sugar being produced in the grapes. For this reason, quality grapegrowing for wine is only possible between the 28th and 50th parallel North and South.

The rate at which photosynthesis happens depends in part on temperature and vines will only start working when average mean temperatures reach 10°C. The hotter the climate the more the vine will produce sugar and the higher the sugar levels in the grapes, the bigger the style of wine produced with higher levels of alcohol. In cool climate it is obviously the contrary, as temperatures will less frequently exceed 10°C and the wines will be lighter in body and alcohol but have a much higher acidity level. But vines are fussy plants when it comes to temperatures, they don't like it too cold... but they don't like it too hot either, it has to be just the right temperature! Indeed, while the rate of growth increases until average mean temperatures reach 22 to 25°C, it actually decreases if temperature keeps rising until the vine finally shuts down at around 32°C.

In the main, there are two types of grape varieties: those which ripen early and those which ripen late. Essentially what this means is that some varieties need a lot less warmth and sunshine to reach their full ripeness. You could compare that to the speed at which we get a sun tan. I am blond and have a fair skin, my girlfriend has got dark hair and olive skin. If I want to be as tanned as her at the end of the summer, I'll have to spend twice as much time on the beach as she does. If we were grapes I'd be a late ripening variety and she'd be an early ripening variety. As you can imagine, it is extremely important to match the type of variety you grow to the type of climate you grow it in. If you plant a late ripening variety in a cool climate it will never ripen properly (tasting 'green' in the process) and the same goes with early ripening variety planted in hot climate (which may taste excessively 'jammy'). They will ripen far too quickly and never achieve balance or complexity of flavour. In most quality wine regions in Europe, growers have chosen to work with varieties that are suited to achieving ripeness in the local climatic conditions - a process of selection that has taken hundreds of years to perfect.

### WATER

Of course, access to water is very important too. A vine will need about 500mm of rainfall per year in cool climates, rising to about 600-700mm in hot climates but the timing of this hydration is even more important than the quantity. If all the rainfall happens in winter, as is often the case in Mediterranean climates, there won't be any water left in the soil when the plant needs it the most and this is why it is essential to find the most suitable soil type in any given climate. A soil with excellent water-holding capacity would certainly help in a Mediterranean climate whereas a more cooler, wetter climate such as the Loire Valley would require a well drained soil. If anything a vine would rather have too little water than too much and is happier in drier conditions (although too little and the plant will shut down or die).

### WIND

A certain amount of wind at the right time can be essential to the production of quality wine and form an intrinsic part of the terroir in a region. Some winds are so integral to the character of the local viticulture that they have their own names!

The main benefit that wind brings is that it dries the grapes following any rainfall and reduces the humidity of the microclimate. In turn, this minimises the chance of grapes being affected by rot which is a major cause of reduced crops and off-flavours in the resulting wines. Of course, there are exceptions to every rule, and in some sweet wine producing areas certain types of rot are actively encouraged - but in general it is a curse to wine makers and wind is the most effective (non-chemical) solution to the problem.

The other big benefit to a steady breeze is that it cools the fruit down and prevents it from baking. This has a big knock-on effect on the taste of the wine as it promotes freshness and brightness of flavour and protects acidity levels.

# INTRODUCTION TO THE WORLD OF WINE PART TWO

## LANDSCAPE

Altitude, gradient of slope, isolation, aspect (orientation in relation to the sun), shelter from surrounding forest or mountains and proximity to bodies of water such as oceans, lakes or rivers all have an impact on the climate of a vineyard. Altitude for instance brings temperature down by 0.6°C per 100m, allowing the production of wine as close to the equator as 24° south as in Argentina's region of Salta where vineyards can be found 2000m above sea level. Just to give you an idea, the 24th parallel north runs through countries such as Libya, Egypt, Saudi Arabia, Pakistan or India, not exactly the coolest countries in the world, so altitude is all important in this sort of place!

Slopes are also beneficial as they encourage both air circulation and water drainage. Land surfaces absorb heat from the sun during the day and release it into the atmosphere at night. As they lose heat, the air directly in contact with them cools down, condenses and becomes heavier. Heavier air then slides down towards the bottom of the slope making vineyards situated on a hill warmer than their counterparts on the flat plains. This is especially beneficial in cool climates where such a situation allows better ripening conditions and can also prevent the vine from being damaged by extended periods of frost.

Aspect refers to the orientation of a slope in relation to the sun: is it facing north, south, east or west. East facing slopes will catch the sun in the morning and this is considered to be better as it shakes the vines into action after a cool night when they most need it. They are also sheltered from cold stormy winds which tend to come from the west. It's not all bad for west facing slopes though as they get the sun in the afternoon and enjoy warm conditions longer into the night.

South facing slopes in the northern hemisphere and north facing ones in the southern hemisphere have the obvious advantage of facing the sun all day which increases the extent to which they intercept the sun rays. It has to be said that in many New World regions nowadays, winegrowers are seeking cooler conditions by planting vineyards facing away from the sun in order to extend the ripening period as there is no shortage of warmth and sunlight in places like the Barossa Valley!

Large bodies of water such as lakes, rivers and oceans have a moderating effect on climate, reducing extremes in temperature. Water absorbs and stores heat with very little change in temperature from a day to another or between day and night. I'm sure we've all realized that, on a hot day, it is much more pleasant to be by the sea than anywhere else inland, but why? No it's not just for its soporific qualities or because we can jump in the water anytime we want! What happens is that the air on the beach becomes hotter and hotter as the sand absorbs heat from the sun. Hot air expands, becomes lighter and rises up in the atmosphere. Air is then drawn from the sea to replace it but, as the sea is much cooler than the sand, the air above it is also cooler which creates a breeze constantly bringing cool air from the sea towards the shore. This is exactly what happens to a vineyard located next to large body of water. At night on the other hand, the contrary happens as cold air descends from the land towards the water which is now relatively warm in comparison to the land. This increased air circulation has the effect of creating much more stable climatic conditions with no extremes in temperature or rainfall. So it cools the vines during the day and heats them during the night - genius!

## PART TWO INTRODUCTION TO THE WORLD OF WINE

### NEW WORLD vs OLD WORLD

Perhaps the most convenient difference in wine styles comes from comparing the Old World and the New World. Traditionally the 'Old World' has been thought of as the classic European wine countries like France, Germany, Italy and Spain. The 'New World' encompasses the colonial powerhouses like USA, Australia, New Zealand, Chile, Argentina and South Africa.

Although wines have been made there for many years, only recently (past 30 years) have they started to gain an international reputation for the quality of their wine. The rise of new world wine to ubiquity in every supermarket is due in part to 'varietalism' - the marketing of wine based on the grape varieties used rather than the specific place that it originates from. Many would say that this resulted in new world wines being more 'obvious' than their old world counterparts, as they often rely on the vibrant and distinguishable characteristics of the grapes used rather than the nuance and subtlety provided by geography and terroir.

The jury is, of course, most definitely out on this, as there are many fine examples of all wine styles being made in new world countries. France and Italy don't have the monopoly on elegance, finesse and quality. On the other hand, there can be little doubt that, at lower price levels, new world producers tend to make wines which are more intensely fruited and don't require food to make them quaffable, which is something that the classic countries have had to wake up to. Many people who are new to wine begin by enjoying the vibrantly bold flavours of the New World and it is this accessibility that has made them so popular.

### APPELLATIONS

Wine has been made in France for more than 2000 years, and for most of that time viticulture and winemaking have been absolutely free of rules. You could grow anything anywhere and make the wine any way you want. It is this period of absolute freedom that allowed French winegrowers to understand what worked and what didn't, mainly by trial and error and careful observation. Some grape varieties turned out to be more suited to certain places, and certain winemaking processes more successful than others. Monks were instrumental in the recording of these findings. First the Benedictians, then from the 11th Century the Cistercians studied the soils of French vineyards so closely that, in Burgundy for instance, they drew maps delineating hundreds of different vineyards regarded as unique for the quality and character they impart to the wines. They were so obsessed with terroir that they would go as far as tasting the soil!

The work done by grapegrowers and monks during these 2000 years meant that certain places gained reputations for the specificity of the wine they produced and this was, in turn, the foundation that a revolutionary set of laws was built on: the Appellation d'Origine Contrôlée (AOC) system. It sets out the ground rules for wine production in France, stating what can be grown where, how it must be cultivated and what techniques can be used to make the finished wine. While there is still flexibility in the system, the idea is to promote 'typicity' of a given product from a specific place - that's why you will never see Sancerre made from Pinotage!

The AOC system began back in the 1930s when the Baron Le Roy decided he would propose regulations to govern the production methods and geographic boundaries of his beloved Châteauneuf-du-Pape. The Baron was furious at the growing volume of wine from outside the area that was being fraudulently bottled as Châteauneuf, particularly as the large stones (called 'galets') throughout the vineyards helped to create a unique terroir. These large pebbles soaked up the heat of the sun during the day and then radiated warmth to the low-trained vines during the night, meaning that the fruit in Châteauneuf would invariably ripen far better than in other areas, giving wines of greater body and richness.

Today the AOC system has been expanded beyond wine to include spirits, cheese, chickens and even lentils. It is important to remember that the 300+ wine appellations are not necessarily a guarantee of quality, only a guarantee of authenticity, and herein lies the problem. Whether or not the galets of Châteauneuf or the Kimmeridgean clay of Chablis infuse character into their respective wines, this alone will never ensure a quality bottle of wine. Only a combination of great terroir, enlightened winemaking and favourable vintage conditions will do that. There are even those that dispute the entire notion of terroir and would have you believe that it is the human influence that dictates the intrinsic quality of a wine, but where's the romance in that?

It is really important to remember that while the AOC approach is a national obsession in France - not everyone loves it. The rules are a big turn off for many people and many of them refuse to participate in the system. Also, don't forget that it is not just France that uses them. They are used all over the world, from the DOCs of Italy and the DOs of Spain to the AVAs of America.

## **Recommended further reading:**

### General reference:

World Atlas of Wine; Hugh Johnson & Jancis Robinson  
Sotherby's Encyclopedia of Wine; Tom Stevenson  
Oxford Companion to Wine; Jancis Robinson  
Wine Buyers Guide; Robert Parker  
Wine Behind the Label; Phillip Williamson & David Moore  
Hugh Johnson's Pocket Wine Book; Hugh Johnson

### More advanced reference:

The New France; Andrew Jefford  
Cote d'Or or The Wines of Burgundy; Clive Coates  
Bordeaux; Robert Parker  
The Great Domains of Burgundy; Remington Norman & Charles Taylor  
The World's Great Wine Estates; Robert Parker  
The Complete Bordeaux; Stephen Brook

### Interesting reading:

The Billionaire's Vinegar; Benjamin Wallace  
Adventures on the Wine Route; Kermit Lynch  
Confessions of a Wine Lover; Jancis Robinson  
Reflections of a Wine Merchant; Neal Rosenthal  
My life uncorked; Hugh Johnson

### Good (and free!) wine websites:

wineanorak.com  
thewinedoctor.com  
burgundy-report.com  
love-that-languedoc.com  
wineterroirs.com  
wine-pages.com  
tv.winelibrary.com  
bourgogne-info.eu  
robersonwinemerchant.co.uk/blog  
decanter.com

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