

SPARKLING WINE

DEFINITION

Wines that have a sparkle or effervescence in them are called sparkling wines. This effervescence is caused by carbon dioxide (CO₂) gas; produced during (second) fermentation that is trapped and not allowed to escape or injected artificially. These wines are usually white or pink in colour, but reds are also available. The choice ranges from deluxe brands of Champagne at dizzy prices down to fizzy vin ordinarie that tastes like still-fermenting grape juice with a spoonful of sugar thrown in. For example: Champagne, Marquis de Pompadour etc.

METHODS OF PRODUCTION OF SPARKLING WINES

There are four methods of production of Sparkling wine:

(i) THE CHAMPAGNE METHOD: The most laborious and therefore the most costly means of making a wine sparkle is the *Champagne* method (*méthode champenoise*) in which a second fermentation takes place in the bottle. This method is used in making of the best sparkling wine called Champagne. This method is called as *méthode traditionnelle* or *método classico* if employed outside the limits of Champagne area in France and the resulting wine obtained is called *vin mousseux*.

(ii) MÉTHODE CUVE CLOSE (CHARMAT METHOD): Eugene Charvat invented this method in 1909. The wine undergoes a secondary fermentation in a sealed tank and then is filtered and bottled under pressure. It is also called the bulk method or closed tank method.

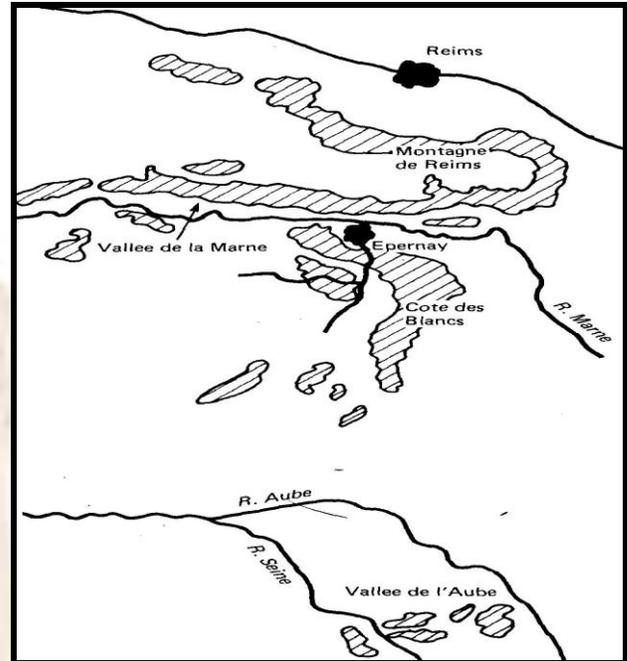
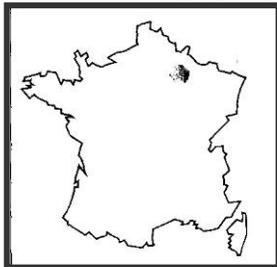
(iii) TRANSFER METHOD (MÉTHODE TRANSVASEMENT): The second fermentation takes place inside the bottle, which is then chilled and disgorged into a pressurized tank. There the wine is filtered and then bottled under pressure.

(iv) MÉTHODE GAZIFIÉ: In the injection method, known also in France as *méthode pompe bicyclette*, the CO₂ is pumped into the chilled wine under pressure. It is the quickest and cheapest method of all. The resulting large bubbles soon disappear once the wine is poured into a glass.

CHAMPAGNE-THE MOST FAMOUS SPARKLING WINE

Champagne is universally accepted as the finest of sparkling wines. This celebration wine is produced 145 kilometres north-east of Paris in the province of Champagne. The total area permissible for the cultivation of the vine is 34,000 hectares of which 28,000 hectares are in actual production. Nothing from outside Champagne area is entitled to call itself Champagne. It is produced in the following zones within Champagne:

- (i) the *Montagne de Reims* (mountains of Reims);
- (ii) the *vallée de la Marne* (valley of Marne) around Epernay;
- (iii) the *valée de l' Aube* (Aube department);
- (iv) the *Côtes des Blancs* – literally hillside of whites – so called because it is entirely planted with Chardonnay grapes.



SOIL AND CLIMATE: The soil is generally chalk of belemnite which affords good drainage and is ideal for producing light, white wines. The climate is chilly and cool with an average annual temperature of 10°C - just one degree above the extremity for the ripening of grapes.

GRAPES: The three grapes permitted are *Pinot Noir (black)*, *Pinot Meunier (black)* and *Chardonnay (white)*. The black grapes give richness, softness and predominance of flavour and the white Chardonnay adds elegance and balance to the blend. Most blends are two parts black to one part white.

But sometimes champagne is made entirely from black grapes and labelled *Blanc de Noirs*. When made from the Chardonnay grape only it is sold as *Blanc de Blancs*.

GOVERNING BODY: The vineyards are graded by the champagne governing body, the *Committee Inter professionnel du Vin de Champagne (CIVC)*, from 100% (*grands crus*) to 80% (*premiers crus*), with relative prices for the grapes per kilo at harvest time. The CIVC are responsible for ensuring that the traditionally high production standards are maintained. They also deal with the general marketing and promotion of the wine - including the protection of the name Champagne.

BACKGROUND AND HISTORY OF CHAMPAGNE

Up to the end of seventeenth century, the wines of Champagne were still and red. They did not like to travel and they did not keep well. In 1660s, the Champenois turned their hands to make white wine, which was not much of success; but it tended to sparkle as the weather became warmer. The cold weather of autumn would mute the fermentation process and the warm weather of spring would rejuvenate the yeasts, causing a second fermentation.

At the age of 30, Dom Perignon, a blind Benedictine monk and cellar master at the Abbey of Haut-Villiers, recognised that this prickly wine had potential for improvement and exploited this phenomenon. He experimented with compensatory blending of grapes from different locations. He got bottle-makers to make stronger bottles so as to withstand the pressure better. He introduced the use of proper corks

instead of the previously used oil-soaked hemp or rag stoppers. The combined initiatives were successful.

Today, Champagne can be a blend from the products of as many as 40 different vineyards. The bottles are strong enough to withstand an internal pressure of 6 kg/cm², equivalent to the tyre pressure of a BEST Transport Bus and corks help in confining the sparkle for life in the bottle.

MÉTHODE CHAMPENOISE

Méthode Champenoise is the only method used in production of Champagne. The process starts as soon as possible after the harvest and takes approximately **five years**. The steps involved are as follows:

(i) GRADING, WEIGHING & DESTALKING: The grapes are hand-picked - mechanical harvesting is forbidden as it might mangle the black grapes and cause discolouration of juice. Only graded grapes in prime condition are gathered. This selection is important for quality and is called *épluchage*. They are weighed to determine the quantity required for fermentation. Furthermore, destalking also takes place.



(ii) CRUSHING (PRESSING): Juice (called *must*) is extracted from grapes by crushing it with feet (*treoddening*) traditionally in some regions or pressing it with mechanical presses.

The premier producers use only the juice from the first pressing, known as *vin de cuvee*, to make their champagne. A subsequent pressing - *premier taille* - which gives a slightly darker juice, is sold to co-operatives to make their champagne or sold to concerns who specialize in making BOB (buyer's own brand) champagne. The third pressing of the grapes - *deuxieme taille* - is not used for making of Champagne legally. This is usually fermented and distilled into local brandy - Marc de Champagne.

(iii) SULPHURING: Sulphur dioxide (SO₂) is added fairly early in the fermentation process to prevent air from oxidizing the juice and converting the alcohol into vinegar. The air has bacteria, principally "acetobacter" which is aerobic i.e. it is alive in the presence of oxygen. These acetobacters can convert alcohol into vinegar. Sulphur dioxide, being hungry for oxygen, takes up the oxygen from the *must* to let the wine yeast, which is anaerobic (able to work in the absence of oxygen) to convert the grape sugar into alcohol. Sulphur dioxide also forms a coating on the surface of the juice to prevent the air from entering the juice and thereby letting the wine yeast to do its work.

(iv) FERMENTATION: When the pressed juice emerges it is allowed to settle for about 12 hours, so that any impurities and solid matter descend to the bottom of the vat. This practice is known as *debourage*. Fermentation - the process of adding wine yeast to must to convert the natural sugar present into ethyl alcohol - follows in stainless steel vats at a temperature of 20°C (68°F). The resulting dry white wine will have an alcoholic strength of 11 %.

(v) CELLARING: The new wine is rested until the following spring in casks (about five months). The casks are filled to the full to exclude air. The casks are purged of any acetobacter by steaming and adding sulphur dioxide. This is called "cellaring".

(vi) RACKING: During cellaring the wine is separated from the dead yeasts that settle at the bottom of the casks. The wine is carefully pumped into another cask without disturbing the dead yeast leaving some wine at the bottom called lees, which is sent for distilling into *marc-de-champagne*.

(vii) FINING AND FILTERATION: This is the process of converting the cloudy wine into clear 'fine' wine. This may be done with a gelatinous substance such as isinglass (bladder of sturgeon fish), white of egg or Bentonite—colloid clay, which collects the protein haze in the wine during its passage to the bottom of the cask. The wine may then be passed through fine filters.

(viii) BLENDING (ASSEMBLAGE): After the first fermentation-cellarling-racking-finning & filtering a cuvee or blend is made. It may consist of any number of 250 village wines produced in the region and of different years.

(ix) BOTTLING: Once the blend has been agreed by the principals of a champagne house, the still wine is pumped into a large vat. A controlled proportion of *liqueur de tirage* - a mix of old champagne, sugar and yeast - is added. The wine is immediately bottled and crown caps are attached.

(x) SECONDARY FERMENTATION: Second fermentation, which lasts up to three months, takes place within each bottle and as the carbon dioxide is unable to escape it becomes chemically bonded in the wine. This slow process is known as *praise de mousse* (capturing the froth). It produces continuous stream of minute bubbles - the smaller and more intense they are the better. It also raises the alcohol content from 11% to 12% and the internal pressure to a peak of about five-six kg/cm². The bottles lie horizontally, piled high, resting on wooden slat dividers - *sur lattes* in chalk cellars. The wine

is now powerfully effervescent but it is not clear, as an **opaque(dark which is not easily visible) deposit of dead yeast**, tannin and other matter has settled along the inside of the bottle.

(xi) REMUAGE: Remuage or riddling is the traditional method used to clear the wine. The bottles, still horizontal, are taken to a holed wooden frame **called a pupitre**. This is made up of two rectangular boards hinged together to form an inverted V shape. The holes can accommodate the bottles (necks inwards) in any **position from the horizontal to the vertical**. The **remueur (the removal person)** manipulates the bottles, turning, oscillating and tilting each one gradually to encourage the sediment into the neck of the bottle. At the end of this skilful but labour-intensive operation, which takes up to three months, the bottles will be almost vertical and the sediment resting on the cap. Many firms have now replaced their **remueurs with mechanical, computerised gyro-palettes**, which can do the same job equally well in **one week**.

(xii) AGEING (MATURING): The bottles may be rested again – *sur pointes* - upside down (the neck of one in the punt of another) for some time. The minimum ageing for non-vintage and vintage champagne is one year and three years respectively. However, the maturing period is more likely to be three years for non-vintage and five years for vintage quality.

(xiii) DÉGORGEMENT À LA GRACE: Still upside down, the bottles are passed along an automated line and the necks are immersed in a freezing liquid of brine for seven minutes. The sediment is frozen into a pellet of ice, which is removed by the process of *dégorgement* (disgorging). The *dégorgeur* (the discharger) removes the temporary crown cap and the pressure of carbon dioxide within the bottle expels the pellet of ice. Brilliantly clear champagne with an internal pressure of about five to six kg/cm² is left. The little champagne lost by the discharge is replaced by a dosage or solution of cane sugar and older champagne called *liqueur d'expédition*. The amount of sugar in the dosage will determine the style and relative sweetness of the champagne. They may vary from *brut* (very dry), *sec* (medium dry), *demi-sec* (medium sweet), *to doux* (sweet).

(xiv) AGEING: The bottles are now sealed with best-quality corks from Portugal or Spain and wire cages are affixed to hold the corks in place. They may get a little more ageing for about a year before being dressed - neck foil and label - for sale.

STYLES OF CHAMPAGNE

- ❖ **VINTAGE CHAMPAGNE:** This champagne is made from grapes of a single good year. The year will always appear on the label. The bottle may possibly contain some older wine, which is permissible, but is likely to be done only when the maker believes that he will make an even better wine by doing so. The decision on whether or not to offer a vintage is entirely up to the maker. This wine is well matured before being released for sale and is usually firmer and has more decisive characteristics than non-vintage.
- ❖ **NON-VINTAGE CHAMPAGNE:** This is a blend of wines from different years. The finest will have some vintage quality wine in the blend. It forms by far the largest proportion of the output of the Champagne area.
- ❖ **PINK CHAMPAGNE:** May be of vintage or non-vintage character. Classically made by leaving the black grape skins with the juice until it becomes pink in colour. It can also be made by adding red wine, such as Bouzy, to white wine, before bottling.

- ❖ **CREMANT:** This is a style of champagne, which is semi-sparkling - having about 3¹/₂ atmospheres of pressure. It sometimes has a village name attached, for example *Cremant de Cramant*.
- ❖ **CUVÉE DE PRESTIGE (LUXURY CUVÉE OR DELUXE BRANDS):** These fabulous and expensive flagship champagnes are made in the best years. They may be of a single vintage or a combination of different vintages. But, the final quality is deluxe. They are mostly marketed in elegant bottles, which are sometimes stylishly decorated to mark a special occasion. Famous Champagne houses (Grandes marques) offering such champagnes are Dom Pérignon, Roederer Cristal, Bollinger, Pol Roger Winston Churchill, Dom Ruinart, Tattinger, Louis Roederer, Veuve Clicquot, Krug, Pommery & Greno, Heidsieck Dry Monopole etc.

SMALL PRINT ON THE CHAMPAGNE LABEL

Besides the more obvious descriptive information, the label also show in small letters the type of producer, followed by a matriculation number which is given to each wine-maker.

(i) NM (Negociant-Manipulant): The term means merchant-handler and is associated with the great champagne houses that buy grapes from other sources besides their own.

(ii) RM (Recoltant-Manipulant): This harvest-handler makes their own wine from their own grapes and sells the product usually under their own name.

(iii) CM (Cooperative-Manipulant): The co-operative handler makes the wine from grapes or base wine obtained from all kinds of sources.

(iv) MA (Marque Auxilaire): A brand name which can be associated with the producer who sells their wine under a second label, either to facilitate a purchaser's requirement or to distinguish the wine from their own main brand.

Sometimes the letters **RD** appear on a label. They mean **récemment dégorgé** -recently disgorged. Those wines have been left upside down (sur pointes) in their bottles to mature, in contact with the yeasts deposits, for many years. This produces a fine, beautifully balanced wine, often of deluxe quality. They are usually released for sale after eight to ten years, sometimes longer. They are disgorged just prior to selling in order to maintain their vigorous brilliance.

Although Champagne is rated the world's finest sparkling wine, it is possible to buy indifferent Champagne. The word Champagne is not of itself an automatic guarantee of quality.

NAMES AND CAPACITY OF VARIOUS CHAMPAGNE BOTTLES

| <u>NAME</u> | <u>CAPACITY</u> | <u>BOTTLE SIZE</u> |
|--------------------|------------------------|---------------------------|
| Quarter-bottle | 20.00 cl | |
| Half-bottle | 37.50 cl | |
| Bottle | 75.00 cl | |
| Magnum | 1.5 litres | 2 bottles |
| Jeroboam | 3.0 litres | 4 bottles |
| Rehoboam | 4.5 litres | 6 bottles |
| Methuselah | 6.0 litres | 8 bottles |
| Salmanazar | 9.0 litres | 12 bottles |
| Balthazar | 12.0 litres | 16 bottles |

Nebuchadnezzar

15.0 litres

20 bottles

OTHER SPARKLING WINES

FRANCE: There is a vast production of sparkling wines in every wine-producing area of France. The best known is **Vouvray** from the Loire valley. It is a fuller wine as compared to non-vintage Champagne and dry, but not as dry as Champagne. Districts of **Saumur** and **Mountlouis** of Loire also produce quality sparkling wines. They all use Méthode Champenoise in its production. **Seysell** in Rhône make an admirable clean, delicate sparkler. **Burgundy** turns some of its red wines into sparklers, but these are not as successful as a pink one called **Oeil de Perdrix, partridge eye**.

ITALY: **Asti** - a town in Piedmont, in the extreme north-west corner of Italy - is a popular sparkling wine of Italy, made from muscat grape. Nearly all the wine made in this area is converted to spumante, either **Asti spumante** or **Moscato d' Asti**. Best of Asti has all of the summery fruitiness of muscat grape. Some makers use the méthode champenoise for their wines. Most of the sparkling wines from Asti area are sweet, although some makers try their hands at less sweet wines, using Riesling or Pinot grapes. But, it is not that successful.

Sparkling wines as in France is made in various parts of Italy as well, including the reputed ones from **South Tyrol**.

GERMANY: Sparkling white wines are called as **Sekt** (Sack) in Germany. Before, the work sekt came into existence, it was known as **Schaumwein**.

Some German sparklers are good, but costs around the same price as decent non-vintage Champagne, and are therefore not a good buy. Plain Sekt are not necessarily made from grapes grown in Germany, and some sparkling wines comprising partly German wine and partly imported wine, are unexciting. Thus, the cheapest varieties of Sekt are best ignored.

Better qualities of Sekt make good, clean drinking, but they are suitable as alternatives to Champagne *or* Vouvray only when their price is appreciably lower.

SPAIN: Sparkling wines of Spain offer better value than many German sparklers. They have no particular distinction, but simply offer good, straightforward drinking, usually medium rather than dry or sweet, at a modest price.

THE UNITED STATES: **California** produces creditable sparkling wine. Much of it is sold as Champagne (generic name). These wines use the grapes used in Champagne and the méthode Champenoise also and hence have succeeded to emulate the finesse of authentic Champagne. But, they are not dry as Brut Champagne is.

Sparkling wines are also made in **New York State**. Here, american native vines are extensively used as traditional wine grapes are difficult to grow. As a result, wines show no lacks of character but tend to taste somewhat perfumed.

OTHER SPARKLING WINE TERMS

FRENCH

- Vin mousseux:** sparkling wine other than Champagne
- Méthode traditionnelle:** sparkling, made by traditional method
- Pétillant/perlant:** slightly sparkling
- Crement:** less sparkling than mousseux

PORTUGUESE

- Espumante:** sparkling
- Vinho Verde:** mening 'green wine', slightly sparkling

SPANISH

- Espumosos:** sparkling
- Metodo tradicional:** sparkling, made by traditional method
- Cava:** sparkling, made by traditional method

ITALIAN

- Spumante:** sparkling
- Frizzante:** semi-sparkling

GERMAN

- Spritzig:** slightly sparkling
- Sekt:** sparkling (also used to mean the wine itself)
- Schaumwein:** sparkling of lesser quality than Sekt
- Perlwein:** slightly sparkling
- Flaschengarung nach dem traditionellen Verfahren:** sparkling made by traditional method