



## WINEMAKING TERMS

**Grape Variety** - The type of grapes used to make this wine.

**Growing Conditions** - Climatic conditions that influenced the maturation of the grapes and thus the wine itself. While the microclimate of Montalcino in general and the Castello Banfi estate in particular is fairly consistent from year to year, there are gradual fluctuations in nature that add variety to the spectrum. While other winemaking regions in Italy may see two or three outstanding vintages in a decade, Montalcino experiences about 7 out of 10 with great results.

**Date of Harvest** - Day or days initiating the harvest of the grapes used to make the wine in reference. In the case of some blends, different grape varieties are harvested at different points, and the fermented wines are later blended in the winery. Castello Banfi's own harvest period is longer than other producers in the region because of the unique number of varieties produced on one estate. Picking generally starts around the end of August with the lighter white varieties such as Pinot Grigio, and continues through fuller bodied whites and medium bodied reds, finishing up with the big reds like Cabernet Sauvignon and Brunello in mid-October.

**Date of Bottling** - Day or days during which the wine was transferred from either the aging barrel or stainless steel storage, bottled and corked. If a wine requires bottle aging, labeling is done immediately before release to the market. The entire lot of certain wines is bottled all at once, while other wines - particularly those meant to be enjoyed young - are kept in bulk storage throughout the year and bottled according to market demand in order to ensure freshness of the product.

**Fermentation Method** - Refers to the process that transforms grape juice into wine. Generally takes place in either the neutral, temperature controlled environment of stainless steel or directly in oak barrels to impart character, flavor and harmony to fuller bodied white wines.

**Fermentation Temperature** - The temperature at which fermentation took place; generally a range of about 55 to 79 degrees Fahrenheit, generally slightly higher for reds than for whites, but the goal of the winemaker is to keep the temperature as low as possible without arresting natural fermentation so as to avoid any unpleasant flavors that "hot" fermentation would impart. While the fermentation temperature is easily controlled in stainless steel tanks, it is more challenging when a wine is fermented in oak barrels, which must be isolated in a temperature-controlled room of the winery.

**Length of Fermentation** - The amount of time to change grape juice into wine. Depends on several factors, including: fermentation temperature (lower takes longer), the structure of the grape, and the variations in sugar content dictated by each vintage's weather conditions (the more sugar present, the longer the fermentation process). White wines are generally fermented at lower temperatures and thus tend to have a longer length of fermentation (10-15 days) than the reds (6-9 days).

**Malolactic Fermentation** - the process of converting Malic acid (the aggressive, harsher kind like that found in green apples) into Lactic acid (the softer, creamier kind with flavors like those found in milk and butter), resulting in a softer wine. It is a natural process that is encouraged in part by low [SO<sub>2</sub>](#) levels and a warmer temperature (above 15 degrees centigrade) at the appropriate stage than would otherwise be appropriate for storage. Reduces the acidity of a wine, biologically stabilizes it, and adds complexity to the flavor.

**Length of Barrel Aging** - Amount of time the wine spends in wood. Sometimes dictated by government regulations for the wine type, other times a judgement call on the part of the winemaker. Practice depends on the winery's style; at Banfi we seek to emphasize the fruit flavor in the wine, and simply surround it by a frame of spicy oak flavors rather than overwhelming it.

**Origin of Barrel** - Where the wood used in making the barrel was grown and harvested. Two basic sources are used at Castello Banfi: French oak barrique of 350 liters (about 60 gallons) and large Slavonian oak casks ranging in size from 6,000 to 12,000 liters (1,500 to 3,000 gallons). The Slavonian oak casks impart subtle flavor because of the tightness of the grain, inherent flavors of the wood and the larger ratio of volume of wine to surface area of wood. The French oak barrels are used for shorter periods of time but contribute more intensive and distinctive flavor. Castello Banfi generally uses a combination of four types of French oak barrique: Allier, Nevers, Chêrs and Tronçais, which vary in intensity and wood character, but combine to achieve a balanced flavor. Recent experiments using a small percentage of American oak barrels have given positive results.



**Brix** - a measure of sugar content or concentration in the grape juice at harvest. At normal fruit maturity, growth ceases and physiological accumulation of sugar ceases at about 25 Brix; further increases are the result of water loss as the grape develops into a raisin, which is only desirable in late harvest dessert wines. Desirable range for a table wine is between 19.5 and 23.5 in free-run grape juice before fermentation. Brix, along with weather and acidity, is one of the major determining factors in the Date of Harvest

**Alcohol Content** - A natural result of fermentation, when the grape skins are broken by "crushing" and the yeast from the outside of the grape comes into contact with and metabolizes the sugar from inside the grape and transforms it into alcohol, carbon dioxide and heat. Content by volume ranges between 9% and 15% for table wines, with most falling between 11% and 13%. An important measure in determining the body of a wine.

**pH** - A measure of the acidity in wine. At low pH (high acid) levels, the wine has greater protection from bacterial spoilage, and are usually more intense and lively (see Total Acidity), while wines with a high pH (low acid) have a dull color. A high concentration of acidity can result in the tart taste often associated with lemons. All wine is acidic, with a pH range from about 3.1 for a crisp chardonnay to 3.8 for a soft Cabernet Sauvignon. Distilled water is neutral at 7.0, while pure lemon juice has a pH of 2.2, for example.

**Extract** - A measure of the wine's density as defined by the nonvolatile dissolved solids of the wine. Lengthy fermentation and maceration on the skins contributes to high extract, given that rich grapes with a high concentration of all their natural compounds are used. For white table wines, the range is generally from 16 (for a very light wine from a high yielding crop) to 21 (for a very concentrated, barrel aged Chardonnay or Sauvignon Blanc), while white dessert wines can reach up to 25 and higher (for a Trockenbeerenauslese and others). Red wines range from 21 for the lightest to over 30 for the fullest bodied (a very good example of Brunello di Montalcino, for example, should measure at least 26).

**Color Intensity** - The amount of a wine's color, most often used in red wines. Ranges from 300 for a very light red wine to over 1,000 for a very intense wine like Cabernet Sauvignon. An average Brunello, for example, would be about 600 or 700. May also be expressed without the 00's - e.g., 5 instead of 500.

**Method of Fining/Collage** - The technique used to clarify wine and remove excess levels of certain natural elements in wine to achieve balance of the remaining components, resulting above all in improved clarity, perfume and stability. It is a process of hydrogen bonding wherein the fining agent (egg white, bentonite clay, gelatin, etc.) is passed through the wine, absorbing a specific amount of the undesired element, and then removed to result in brilliant, or less cloudy, wine.

**Total Acidity** - A sum of the fixed (normal organic fruit acids) and volatile acids (those which can be removed by distillation) in wine. Total Acidity directly effects the color and flavor of wine and, depending on the style of the wine, is sought in a perfect balance with the sweet and bitter sensations of other components. Too much acidity makes wine tart and sharp; too little makes wines flat, flabby and uninteresting. Proper acidity in wine is what makes it refreshing and an ideal accompaniment to food.

**Malic Acidity** - A measure of a tangy, zesty type of acid (akin to green apples) found in many white wines. Attributed with giving a wine "verve" or "crispness," in excess it can be quite harsh and aggressive. Found in all wines that have not gone through malolactic fermentation.

**Volatile Acidity** - A technical term for a the portion of total acidity that is volatile (can evaporate) representing mainly acetic acid, akin to vinegar. Generally found at .3 g/l to .5 g/l. In excess (.8 g/l), it is identifiable as a negative vinegar flavor.

**Total SO<sub>2</sub>** - A measure of total (free and bound) sulfur dioxide in wine. SO<sub>2</sub> is a natural by-product of fermentation that in appropriate amounts is a natural component in healthy wines. The level of SO<sub>2</sub> can be controlled by using yeasts that produce little or none. In judicious proportion it improves the color and primary aromas of a wine, acting as an anti-bacterial, anti-browning and anti-oxidation agent. In excess it can cause off flavors and negative reactions to those who are extremely sensitive to it. At Castello Banfi, steps are taken - mostly through hygienic conditions, low-oxygen fermentation environments and careful grape selection - to maintain the lowest possible levels of sulfur dioxide in our wines.

**Free SO<sub>2</sub>** - The amount of sulfur dioxide that has not chemically bound to other components, making it inactive. In other words, the most detectable amount of sulfur in the wine, which should be a significantly lower number than the total.

**Special Comment by The Winemaker** - personal reflections on the resulting wine based on conditions of harvest and fermentation.

**Tasting Comments** - analysis based on periodic tastings at the winery.