

# Technology in the service of terroir

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### Techniques & technology

#### “Science helps the expression of great wines”

People are conservative by nature, yet it should not be forgotten that civilisation has always made progress by going against the grain.

Certain customs or conservative attitudes live on, especially in Bordeaux, and are professed as the very epitome of quality. Now, not only could nothing be less certain, nothing could be as untrue.

What is needed is careful consideration, human sense and observation; it is too simplistic merely to believe that the great *terroir* on which we sit will suffice.

Speak to the earth, and it shall teach you... (Book of Job).

### Understanding a great *terroir*

Without a great *terroir*, you cannot make a great wine. What makes a great *terroir*?

- A soil, a base,
- Micro-climate,
- The ability to regulate the ground-water supply (limestone, clay, etc.),
- Good drainage,
- Structured microbiological activity.

### Making best use of a great *terroir*

This is not just a purely philosophical issue, but is vital for producing great wines, and so concerns:

- The choice of grape variety,
- Choosing the right rootstock for the right grape variety and right soil,

- The age of the vine,
- Respect of the *terroir* (fertilizing, drainage, various treatments),
- The plantation density.

### **The hand of man**

“Man thinks along with that which he drinks”.

If the problems in human relations often stem from the fact that we do not lend our ear to what others have to say, the same can be said for farming and winemaking.

- Taking the time to go amongst the vines to feel the soil, analysing and checking environmental balances, and human sense are also the best allies of scientific knowledge,
- When left to their own devices, vines never produce fine grapes,
- Using precautionary measures, the equilibrium of the ecosystem, respecting all life-forms (fauna and flora, soil micro-organisms) should be major issues of concern.

### **Producing good grapes**

Care of the vine is an essential element of success.

- pruning,
- de-budding,
- green harvesting,
- leaf removal.

A vine can only properly ripen a limited number of grape bunches.

- Rational use of fertilizing,
- Creating competition between crops (grass seeding).

### **Grape ripening and respecting environmental balances and distinctive character**

Scientific inspection and analysis are essential, but are not simply enough. Here again, tasting and observing the grapes are stages of vital importance.

Grapes that are insufficiently ripe will give less colour, tannins that are acidic and “green”, herbaceous and green pepper aromas, especially cabernet sauvignon and cabernet franc.

Grapes that are over-ripe produce wines that lack acidity, have chocolate or prune aromas and lack of elegance and ageing potential. Balance and harmony, silkiness, subtlety and crispness are what makes a great grape.

### **Selecting the right plots and picking with care**

Each plot behaves differently depending on:

- The soil,
- The age of the vines,
- The grape variety,
- The vine stock,
- The care lavished upon it.

**Grape-picking should be adapted with respect to this diversity, and care should be taken in organising the harvest.**

- Small basket for picking,
- Sorting in the vineyards,
- Sorting in the cellars,
- Swift consignment of the harvest to the vats.

## **Making wine that tastes of grapes and has very distinctive character**

There are several major underlying principles:

- Our great wines often have a fine colour, but colour alone does not make a great wine.
- For our great red wines, they cannot be successfully refined without new wood, but refining wine in barrels does not guarantee its greatness.
- Technology should be seen as a stepping stone that helps us onward in the quest for balance, harmony and taste.
- Wine is a creation for sharing that brings about pleasure and relaxation, the best illustration of which is the empty bottle at the end of a meal.

## **The winemaking and ageing processes, the alchemy of transformation**

- Cold-steeping before fermentation to enhance the fruity taste,
- Temperature control required for decent conditions of fermentation,
- Adapting the size of vats to that of the yields of different plots,
- Optimised contact between marc and juice in terms of surface area, (the proper vat width), in order to enhance gentle extraction,
- Careful use of breaking-up of the cap and re-circulation of the fermenting juice depending on grape variety and vintage,
- Duration and temperature steeping,
- Early transfer to barrels whilst warm, enabling the wood to mellow into the wine better and improving integration of tannins and colour,
- Aged on the lees (avoiding oxidation),
- Percentage of new barrels calculated depending on the wine and vintage,
- Duration of ageing in barrels,

- Cellar temperature during ageing,
- Type of racking and frequency.

### **Excesses and standardisation**

- Excessively low yields,
- Concentration to the detriment of all other elements,
- Loss of distinctive characteristics, due to widespread use of a single grape variety in Bordeaux,
- Over-ripeness,
- Unwarranted use of oxygen in the winemaking and ageing processes,
- Wood is the wine's sole constituent, dominating the taste and other flavours.

### **Conclusion**

There is not one great wine, but some great wines. In each case, they are from a *terroir* of exceptional quality.

They are also uniquely expressed and have real character. New techniques or technologies have helped make immense progress, but they should make room for the charm, personality and taste of the wine.

Harmony is what we should research and the pleasure of sharing wine is what we should encourage.