WORDS **CLIVE HARTLEY**

COMING TO TERMS WITH TERROIR

WHAT has always intrigued me is whether there is a direct correlation to the soil a vine is grown in and the flavour and aroma you finally get in a glass of wine. Perhaps it is whimsical to ponder if you can actually "smell the dirt" that the vine sits in. However, try holding and immerse yourself in the aromas of a traditionally made Grand or Premier Cru Chablis. To me it smells of a freshly opened oyster shell. If you travel to the vineyards, located above the sleepy town of Chablis and stand on those famous intimidating, chilly slopes, you will find banks of fossilised seashells in the soil. Chablis has a distinct terroir.

According to Jancis Robinson's Oxford Companion to Wine 3rd edition (2006) terroir is the "total natural environment of any viticultural site". Terroir is the combined effects of the soil, the topography of the land and climate in all its aspects – Macro (region), Meso (vineyard) and Micro climate (vine canopy).

Let's consider climate before we explore the "dirt" a bit more. Climate plays an important role in determining the style and quality of wine. Often Australian wine displays its climate unambiguously – think about the cultural cringe catch phrase of "sunshine in a glass". However we can modify the climatic effects by choosing the type of canopy, selecting the aspect for a vineyard, growing at high levels of altitude or by planting close to water; be it oceans, lakes or rivers. They can all modify the climate by either making growing conditions slightly cooler or warmer. In some coastal areas of California such as Mendocino Ridge, full bodied reds like zinfandel are grown at higher altitudes than pinot noir; why? Well it is the coastal fog that rolls into the valleys below, (typically Anderson Valley) that allows the higher ridge areas to bask in morning sun and ripen grapes. In Australia, the Hunter Valley receives a welcoming cloud cover in the afternoons, which drifts in from the coast and reduces the sometimes dangerously high summer temperature.

There are some complex soils around the world, no more so than in Burgundy where in extremely short distances the wines range in quality from superb down to very ordinary. In simple terms central Burgundy is divided in two by a fault line. Those vineyards that are above the Saone fault are often on dry, firm limestone and marl soils. Below the fault line the vines sit often with their feet wet on damp ground with soils composed of silt, sand and clay. Drainage is extremely important. Take the vines at Chateau Latour in Bordeaux for instance. Located in sight of the Gironde estuary, they sit on a bed of gravel that is up to 9m deep in some parts, which means the drainage is excellent. These gravel mounds on their own would not support the vine and it is only through the tenacity of the root system that they survive and find nutrients in bands of clay, silt and sand deep below ground.

All three vineyards are picked at the same level of maturity, they all go through a basket press, open top fermenters, same yeast, same fermentation temperature, same oak profile and racking so the difference seen in the glass is down to the terroir.

So does terroir affect wine styles and quality? One of the easiest ways of determining this is to apply the same winemaking skills to fruit sourced from different vineyards or regions and look at the results. A number of Australian companies do this as well. Frankland Estate in WA and Chateau Tanunda in the Barossa Valley are two excellent examples.

Stuart Bourne, winemaker at Chateau Tanunda in the Barossa, sees regional difference and the role of terroir as the next exploratory step for the Australian wine drinker Since 2005, Chateau Tanunda has produced three shiraz from three different sub-regions in the Barossa - Greenock, Lyndoch and Ebenezer. "We keep the winemaking process identical. All three vineyards are picked at the same level of maturity, they all go through a basket press, open top fermenters, same yeast, same fermentation temperature, same oak profile and racking so the difference seen in the glass is down to the terroir," Bourne adds.

There can be up to six weeks difference in ripening times in the Barossa sub-regions. The three vineyards are spread over a 15-20km radius. Lyndoch comes in earliest, around two weeks later Greenock is picked. Ebenezer is the last to be picked, another couple of weeks after Greenock. They all taste different, notes Bourne. "Lyndoch has distinct mocha and chocolate flavours with plush velvet, rich tannins. Greenock is very muscular with bold, mid-palate fruit and full, firm tannins. Ebenezer is quite different with floral aromas and softer tannins, more elegant in style," he says. The soils are different in all three vineyards and Bourne believes these are the determining factor on why they make different tasting wines. Lyndoch is on deep dark clay, while Greenock has hard ironstone and red clay, and Ebenezer has more sandy loam texture, but well drained.

Frankland Estate is a similar story. Led by Barrie Smith and Judi Cullam, they select riesling fruit from three vineyards within a 25km radius of the winery - Isolation Ridge, Netley Road and Poison Hill. While all three share similar climatic conditions they have different soils and micro climates, and taste quite different.

The best quality wines are the ones that have particular sensitivity to their place of origin and are able to display the DNA of their terroir when poured.