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TANNIN TELLS THE TALE

I REGARD tannin as an essential component to a red wine and I feel disappointed when they are absent. They provide a balance and enhancement to the palate, like adding seasoning to food. Yet so many Australian wines seem to lack tannin, seemingly being replaced by copious amounts of alcohol and fruit. Tannin is an integral part of what constitutes the texture on the palate of a wine and is one of the key attributes of a quality red wine. So why are tannins disappearing in Australian wines? In our industry, perhaps market research has indicated the general wine drinker, and especially the younger market, finds them disagreeable? Or are they necessary at all, when the majority of wine produced is consumed within a year or two of bottling?

Tannins come from a number of different sources. Grape tannins are the commonest type and come from either the skin or seeds. Grape tannins are known as proanthocyanidins or condensed tannins. These are then turned into wine tannins after fermentation, which changes their make-up slightly, especially as they react with oxygen and acids. Wine can also pick up tannins while being matured in oak; these are referred to as hydrolysable tannins.

Grapes vary in the amount of tannin they contain. Often the smaller, thicker-skinned varieties have more tannins. There are some highly tannic grape varieties - cabernet sauvignon, nebbiolo, sagrantino, aglianico and tannat.

Native to Piemonte, nebbiolo gives us barolo and barbaresco, and is increasingly being made in Australia, notably around Adelaide Hills. It could be argued that barolo is not as tannic as it previously was due to better viticultural and winemaking practices, and attempts to make it more of an early drinking style. In traditional Italian regions there is often a split between modern and traditional producers, in other words fruit forward wines verses tannin, earthy wines. That cannot be said of another notable tannic variety - sagrantino. Its home is the hilltop village of Montefalco in Umbria and I recently tasted my way through 30 or so producers, and was astounded at their tannin levels. My mouth was in gridlock for a week. Aglianico is found in Campania and Basilicata in southern Italy, and is colloquially known as the "barolo of the south" due to its tannic nature. There are a tiny number of producers in Australia, Calabria Family Wines being a notable one. Given its name, tannat is not surprisingly a tannic grape and is responsible for the wines of Madiran in south western France as well as being the chief red grape in Uruguay. But tannin can be found lurking in most grape varieties and I've been surprised at levels found in Burgundian pinot noir and Chianti (sangiovese) from Tuscany.

Riper grapes have higher tannin levels, and grapes that have come from lower yielding vineyards that have less access to water, have an increasingly tannic profile due to their higher skin to juice ratio. Generally speaking, warm climates such as Australia produce wines with softer, ripe tannins, while cooler regions, found say in northern France, or south island New Zealand, have greener, tougher and more noticeable tannins which is one reason why you don't see tannic varieties like cabernet sauvignon grown in cooler regions.

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Stalks can also give us tannin. The use of stalks is often associated with pinot noir to give the resulting wine more grippy astringency on the palate. The use of whole bunches in the fermentation vessel also allows more tannins as well as giving the wine some slight carbonic maceration notes.

We are still learning about tannin behaviour and how to master it. Generally wine tannins mellow and soften during ageing, which is one of the key features of a mature wine. This generally held belief, that during the ageing process the tannins continually polymerise and become longer chain molecules until they precipitate or fall out of the wine as sediment, has now been challenged. It may be that the aged wine tannins are simply not combining with saliva proteins and therefore are not reducing your saliva as they did when the wine tannins were young. In research conducted by the AWRI the choice of commercially available yeast strains were shown to influence the amount of tannins a wine had. Oxygen has a major role in modifying tannins and micro-oxygenation has been employed in the wine industry for many years. This is the process of treating wine with small continuous bubbles of oxygen after the fermentation process is complete. The result is a softening of tannins and was first used in the region of Madiran on tannat grapes. Alternatively, winemakers can either strip the wine of tannin through fining with milk, egg or fish products or, if a wine is lacking tannin, they can add oenotannins made from grape seeds.

White wines can exhibit some tannins occasionally, especially if they have had extended skin contact before fermentation or extended time in oak. However, it is fairly uncommon and I advise my students to not look for tannins in white wine.

Tannins react in the mouth with our saliva protein to produce that dry and astringent sensation which can be called "mouthfeel". Basically our mouth is dryer as a result of swallowing our own saliva which has attached itself to the tannins, and it takes a while for our mouth to replace the saliva lost. Interestingly, if the wine has plenty of acidity then we create saliva more quickly and so the two wine constituents can work together. The impact of tannins can be described in a number of ways but it is probably the hardest topic to teach in sensory evaluation training. Tannins are often described as dense, sinewy, robust, bitter and harsh when they are excessive or green; too supple, round, ripe and well integrated when they appear well managed and ripe. When grading tannin you can compare it to tea. Some drinkers enjoy the lightest green teas, which are fairly low in tannin, while others prefer robust English breakfast. Palates have varying levels of sensitivity to tannins. You might thrive on the astringency that tannin creates, while others shy away and simply have a sweet tooth.