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Are Cabernet Sauvignon wines from Sunraysia reflective of Sunraysia's terroir ?

If so, what exactly does that mean ? Figure 1 shows the locations from which we harvested

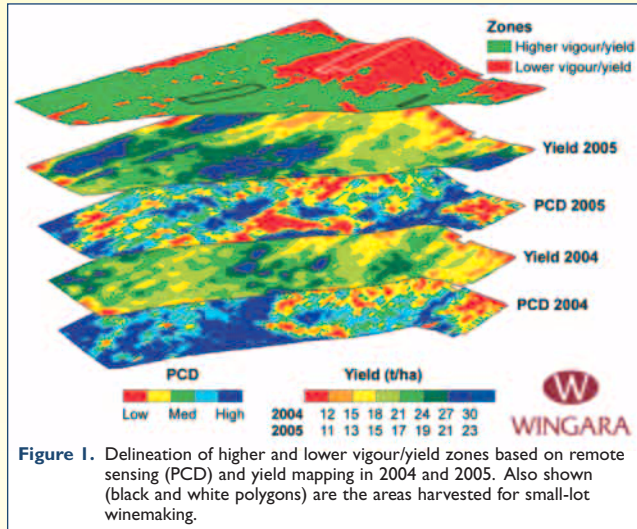


Figure 1. Delineation of higher and lower vigour/yield zones based on remote sensing (PCD) and yield mapping in 2004 and 2005. Also shown (black and white polygons) are the areas harvested for small-lot winemaking.

200 kg samples of fruit for small-lot winemaking, within an 8.2 ha Sunraysia vineyard (Figure 2) which was planted to Cabernet Sauvignon in 1994. These contrasting locations were chosen to be reflective of higher vigour/yield and lower vigour/yield zones identified on the basis of yield maps and remotely sensed imagery (PCD; Figure 1). This vineyard is managed as though it is uniform, yet as Table 1 shows, the fruit from these zones differs markedly.



Figure 2. The Sunraysia Cabernet Vineyard.

Descriptive sensory analysis of wines made in 2005 indicated that the two zones also produced markedly different wines. The wine from the lower vigour/producing zone on higher ground with shallower, sandier soils was perceived to have greater colour

Table 1. Zone-based means for selected vine, fruit and wine sampled at vintage from the high yield/high vigour (H) and low yield/low vigour (L) zones shown in Figure 1.

	2005			2006		
	H	L	Sig ^A	H	L	Sig ^A
Harvest date	Mar 7	Feb 27		Mar 2	Feb 21	
Bunch weight (g)	78.4	68.4	ns	111.7	79.7	***
Berry weight (g)	0.91	0.88	ns	1.05	1.03	ns
Berries / bunch	86	77	*	106	77	***
Baumé	13.4	13.9	**	13.6	13.6	ns
pH	3.56	3.47	*	3.54	3.53	ns
TA (g/L)	7.93	6.71	***	6.96	6.39	*
Colour (mg/g)	1.20	1.35	*	0.84	1.28	***
Phenolics (a.u/g)	1.13	1.24	*	1.05	1.40	***
No. samples	6	11		13	13	

^AStatistical significance based on Students t-test where ***, **, * and ns indicate p<0.001, p<0.01, p<0.05 and no significant difference (p>0.05).

intensity, *aroma impact*, pepper, spice and tobacco flavours and a stronger after-taste or *finish* than the wine made from the higher vigour/yield zone. The latter was characterised as having a more *earthy* aroma and a much weaker after-taste.

In **Padthaway**, we have previously demonstrated that, without manipulation, zones identified in the 4.3 ha Shiraz vineyard shown in Figure 3, produce fruit and wines suitable for very different product streams; the higher yielding hollow has previously produced poorer quality fruit than the rest of the block. We wondered if it might be possible to manipulate the *terroir* of Padthaway and so modify the character of its Shiraz ?

Figure 3. The Padthaway Shiraz vineyard.



In 2004, lucerne was planted in the hollow in an attempt to 'dry it out'; the hollow acts as a natural drainage feature in which the soil remains moist for longer into the season than in the rest of the block. Figure 4 suggests that in 2006, by which time the lucerne was well established, it was significantly impacting on the performance of this vineyard. Winemaker assessment of the fruit from the two zones also suggested that it was much more similar in 2006 than in previous years.

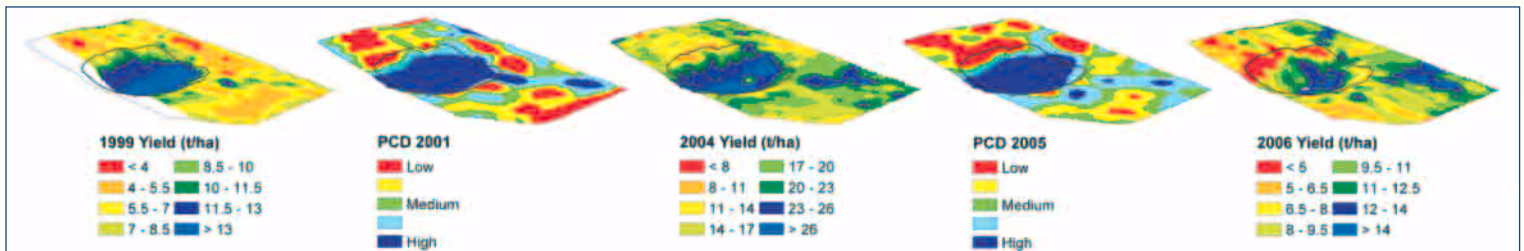


Figure 4. Managing *terroir* in Padthaway. The polygon shown around the edge of the hollow marks the boundary used for selective harvesting and is based on elevation.

CONCLUSIONS

These results support the view that *terroir* is a highly scale-dependent concept. Rather than thinking of it in broad regional terms, it may be more useful to think of it at the within-vineyard scale. These results also suggest that, rather than being somehow 'mystical', at least some elements of *terroir* are manageable.

ACKNOWLEDGMENTS

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