Making Sangiovese in Australia

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Introduction
Since my appointment as winemaker at Coriole in 1988, I have experienced eight vintages of making Sangiovese, and produced 15 wines from this variety. As well as the Coriole Sangiovese, since 1989 I have produced a small quantity (in the order of 100–200 dozen) of a Sangiovese/Cabernet Sauvignon blend labelled Cherise. This wine evolved from my own experimentation with some of the techniques employed in the production of modern-style Italian Sangiovese wines—the so-called ‘Super Tuscans’, and others. These techniques include lading the wine in barriques (a proportion of which are new), and including a small percentage of Cabernet Sauvignon in the blend.

The aim of these techniques is to create a round and supple palate, and to add structure and complexity. Although the base wine is essentially the same, and both wines are made from fruit grown at Coriole, the styles of the two wines are quite different.

Wine styles
Coriole Sangiovese
The Coriole Sangiovese shows the characteristic cherry fruit aroma of the variety, with floral and spicy nuances and a touch of earthiness. It has medium weight in the mouth, with good warmth, texture and mouth-feel. The acidity is firm and crisp, and there is a pronounced tannic grip at the finish. There is no obvious oak character. Although ready for consumption when released, the wine will mature for 3 to 6 years. It is an excellent ‘food wine’.

Cherise
Maturation in French oak barriques gives Cherise an extra dimension in complexity of flavour, structure and ageing potential. The wine is characterised by lifted aromas of black cherries, vanilla and herbs, deep colour, good weight in the mouth with ripe plum and cherry flavours, and balanced oak. The wine is tightly structured but with a degree of elegance. It has medium term cellaring potential, and will mature over 6 to 8 years.

Viticulture
The Coriole vineyards are situated in a range of low hills to the north of McLaren Vale. The elevation is slightly over 100 m, with a south to south-easterly aspect. The average annual rainfall, which is winter-dominant, is 470–570 mm. The total area of vineyard is about 20 ha, of which approximately 2 ha are planted to Sangiovese. The clone is H6V9 from UC Davis, and the planting material was provided from Penfolds’ Kalimna vineyard in 1985. The original 0.8 ha was top-grafted onto Shiraz in 1988, when the yield was approximately 12 t/ha, and this appears to be a good yield to aim for.

Yields at Coriole have varied dramatically from year to year. More vineyard work such as bunch thinning is required to control this. The best vintages at Coriole were 1990 and 1992, when the yield was approximately 12 t/ha, and this appears to be a good yield to aim for.

Typical phenological data
In a typical season, the vines go through the following growth stages as listed below:

- bud burst: late August–early September;
- flowering: late October–early November;
- set: late November;
- veraison: late January;
- harvest: late March–early April.

Oenology
Sangiovese ripens late in the season. Typical analysis at harvest are as follows:

- pH: 3.2–3.3;
- titratable acidity (TA): 7.0–9.0 g/L; and
- total soluble solids: 13–14°Baumé (Bé).

In the early years, the fruit was picked at 12.2–12.7°Bé, but it was evident that later harvesting yielded fruit with more flavour and extract, which balanced the naturally high acidity.

The grapes are machine harvested in the early morning. N o SO₂ is added prior to fermentation. The fruit is destemmed and crushed with the crusher rollers fully open to retain a high proportion of whole berries in the must. Enolferm Bordeaux Red yeast is used and fermentation takes place in 5 t open concrete fermenters with hand plunging for 6–7 days. Temperature is controlled at 18–25°C with the cap temperature reaching 30°C. The free run is drained off of the skins at 0–1°Bé, and the marc is pressed using a W illiams U P 4000 membrane press. The pressings are blended with the free run.

At this point the wine for the Cherise blend is drawn off to barriques with the lees, while the Coriole Sangiovese is stored in tank. Malolactic fermentation (MLF) occurs naturally in both cases, and the concentration of total sulfur dioxide (SO₂) is adjusted to 40 mg/L. The typical analysis of the wine after MLF is 13.2–13.8% ABV; alcohol: 3.4 pH; 6.7–7.9°GL TA.

After several rackings, the Coriole Sangiovese is matured in 3–5 year old French and American oak hogsheads for about nine months.
Depending on the year, 5–15% Cabernet Sauvignon and/or Shiraz is added, to achieve the desired structure and depth, without dominating the characteristic Sangiovese flavours. This regime was altered in 1994 because of the high crop yield and resultant lighter bodied wine— one third was matured in hogsheads, one third in large oak casks, and one third in tank. The result is very satisfying.

Cherise spends up to 18 months in barrique, with the proportion of new oak varying from 20% to 50% depending on the vintage. The wine remains on lees (without stirring) until after MLF, then it is racked, the concentration of total SO₂ adjusted to 40 mg/L, and it is blended with 15% Cabernet Sauvignon.

Both wines are subjected to polish-grade filtration prior to bottling. The Coriole Sangiovese is made available for sale immediately, while Cherise is given 6–12 months bottle age before release.

Conclusion
Since my first experience with the variety in 1988, I believe that Sangiovese has great potential for producing quality wines, in a number of differing styles. The chemical composition of the fruit clearly shows that this variety is suited to the warmer grape-growing areas. There is still much room for improvement, however— particularly in the vineyard where yield control and the introduction of better clones will be important in the future.

Barbera at Brown Brothers

TERRY BARNETT
Winemaker, Brown Brothers Milawa Vineyards Pty Ltd

Style objectives
Barbera is not widely planted or known in Australia, and so our objective has been to produce a wine that best displays the varietal characters. The natural acidity is very high, and it has therefore been a challenge to produce a wine of balance which displays an appropriate amount of fruit. Oak is an important component, but must not be dominant in the wine.

Oenology
Table 1 shows the typical composition of the must at harvest for the past four vintages. The fact that the fruit ripens readily yet retains a high acidity is obvious. If the climate is too cold (as it was at the Whitlands vineyard in 1992), a balanced wine is unobtainable. In a warm climate a more acceptable acid level is achieved, but the wines lose flavour and can be quite bland.

The method of making includes crushing and destemming, yeast added at the crusher, and fermentation in a 30 t Potter fermenter. The must is pumped over twice daily during fermentation by the ‘drain and return’ method. It is pressed after 6–7 days on skins, in a Willmes air bag press, and fermentation is completed in stainless steel tanks.

After malolactic fermentation (MLF), the concentration of free SO₂ is adjusted to 10 mg/L, and the wine is matured in one, two and three year old oak puncheons for 18 months.

Preparation for bottling has sometimes involved deacidification using calcium carbonate or potassium carbonate. The wine may be fined with egg white, followed by filtration through polishing grade pads.

Recent work in Italy has isolated a yeast strain known as D432, which is reported to be able to degrade up to 40% of malic acid during fermentation. The work was done because the average titratable acidity in Piedmont wines is greater than 10g/L. Even more interesting is the observation that the malic acid is converted to alcohol; this is known as maloethanolic fermentation (MEF).

Table 1. Composition of Barbera musts at harvest from three different vineyards: 1992–95.

<table>
<thead>
<tr>
<th>Vintage and region</th>
<th>TA (g/L)</th>
<th>pH</th>
<th>TSS (°Be)</th>
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<tbody>
<tr>
<td>1992 King Valley</td>
<td>10.5</td>
<td>3.61</td>
<td>13.9</td>
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<tr>
<td>1992 Whitlands</td>
<td>20.0</td>
<td>2.86</td>
<td>14.2</td>
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<tr>
<td>1993 King Valley</td>
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<td>1994 King Valley</td>
<td>14.0</td>
<td>3.07</td>
<td>14.0</td>
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<tr>
<td>1994 Milawa</td>
<td>11.5</td>
<td>3.24</td>
<td>13.3</td>
</tr>
<tr>
<td>1995 King Valley</td>
<td>10.5</td>
<td>3.25</td>
<td>13.5</td>
</tr>
<tr>
<td>1995 Milawa</td>
<td>9.6</td>
<td>3.35</td>
<td>13.3</td>
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