Growing Cabernet Sauvignon at Wynns Coonawarra Estate

The influence of vintage, clones and site

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WYNNS COONAWARRA ESTATE
Coonawararra Red and White Winegrape Varieties

Red (90%) and white (10%) winegrape varieties in Coonawararra (by area) (PGIBSA 2011)

Adapted from Unearthing Viticulture in the Limestone Coast
Coonawarra Climatic Comparison

<table>
<thead>
<tr>
<th>Location</th>
<th>Latitude</th>
<th>Longitude</th>
<th>Elevation (m)</th>
<th>Rainfall (mm)</th>
<th>Relative humidity (%)</th>
<th>Min Growing season Temp°C</th>
<th>Max growing season Temp°C</th>
<th>GDD (base 10)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coonawarra</td>
<td>37° 29' S</td>
<td>140° 83' E</td>
<td>59 meters</td>
<td>528 290 291</td>
<td>48</td>
<td>9.2</td>
<td>23</td>
<td>1363</td>
</tr>
<tr>
<td>Margaret River</td>
<td>33° 97' S</td>
<td>115° 05' E</td>
<td>77 meters</td>
<td>1129 757 361</td>
<td>59</td>
<td>11.6</td>
<td>23.2</td>
<td>1597</td>
</tr>
<tr>
<td>Napa Valley</td>
<td>38° 18' 17'' W</td>
<td>122° 17' 3'</td>
<td>3 meters</td>
<td>708 491 206</td>
<td>49</td>
<td>10.3</td>
<td>25</td>
<td>1379</td>
</tr>
<tr>
<td>Bordeaux</td>
<td>44° 49' 50'' N</td>
<td>0° 41' W</td>
<td>54 meters</td>
<td>900 370 563</td>
<td>59</td>
<td>10</td>
<td>20.7</td>
<td>1320</td>
</tr>
</tbody>
</table>

1 Data collected on 21st September 2013 from various web based resources. Australian data sourced from BOM
Wynns Coonawarra Estate

• John Riddoch built the first winery in Coonawarra, now known as Wynns Coonawarra Estate in 1896.

• Samual and David Wynn, wine merchants from Melbourne purchased the Estate in 1951 and 1954 the first labelled Wynns Coonawarra Black Label Cabernet Sauvignon was made.

• Since the release of Wynns Black Label Cabernet in 1954, the focus with Cabernet Sauvignon expanded to include the Wynns single vineyard labels presenting Coonawarra’s regional diversity since 2001, and the Langton’s classified “Exceptional” John Riddoch Cabernet Sauvignon (first vintage 1982).
**AIM:** to grow world class Cabernet Sauvignon that best expresses Coonawarra’s potential

**3 key areas:**

**Vintage** - the impact of the seasonal conditions and management options to reduce the impact of seasonal variability.

**Site** - understanding the variability between and within vineyards, its impact on wine style and management requirements.

**Clones** - ensuring the ideal variety, clone and rootstocks are selected for each site, while ensuring a diverse range of material is used.
The relationship between Growing Degree Days (GDD) and Rainfall (mm) in Coonawarra for the growing season (24th September – 9th April)
Elevation and Latitude Influence

- Coonawarra falls from 63m in the south to 51m in the north.

- Elevation: the temperature falls by around 0.8 °C for every metre drop.

- Latitude partly balances this elevation influence, with the landscape warming by around 0.4 °C per kilometre as you go north from the V&A Lane vineyards.
The Wynns V&A 7 Vineyard elevation range 58 to 60.5 metres influences the temperature variability within the vineyard. The growing season average temperature range for V&A7 is 18.7 °C – 20.1 °C, based on the temperature model (Tav 1st September – 10th April).
Soil Variability – Soil Surface Colour

The Wynns vineyards soil colour has been mapped as another tool to improve our understanding of wine styles and management requirements.
Vineyard Renovations

• High quality heritage vineyards are highly valued and significant investment has gone into nurturing these vineyards.

• 50% of the Wynns Vineyards are older than 30 years and 20% are greater than 40 years in age.

• Complete Cordon Removal (CCR). Since 2001, around 150 hectares have been cut back to 30cm to 80cm above ground, to remove the old cordon before being re-trained and re-trellised.

• 25% of the vineyards have been replanted since 2001.

• Converting old vineyards that currently produce high quality fruit, at extremely low yields to cane pruning, is another technique being used to prolong the life of important heritage vineyards.
• Glengyle vineyard immediately after canopy removal, and pre installing new posts and wire. This method of renovation is called complete cordon removal (CCR).
• In 2007 is the first trial stage of the Glengyle reconstruction, initiated in 2002, and successfully producing the single vineyard wine from 2007 and 2009.
Planting Material Strategy

1. **Proven Australian clones**
   Selected based on:
   - Past performance and wine quality / style
   - Trials and formal assessments
   - Clonal / genetic diversity

2. **Wynns heritage material:**
   - Over the last 15 years, the best vines have been isolated in the Wynns heritage vineyard to select high quality propagation material
   - Cabernet Sauvignon selections have been taken primarily from the historic Redman, Childs and Davis vineyards.

3. **International clones:**
   Selected based on:
   - Australian and international trials, i.e. ENTAV 412, ENTAV 338, ENTAV 169
   - Direct feedback from respected producers in France and Italy that at present craft world class Cabernet Sauvignon.
Over three recent vintages we’ve been assessing the wine quality from five clones in the McBain’s vineyard, located across two adjacent soil types.

Wine Scores

<table>
<thead>
<tr>
<th>Clone</th>
<th>Score</th>
</tr>
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<tbody>
<tr>
<td>SA125</td>
<td>15.9</td>
</tr>
<tr>
<td>CW44</td>
<td>15.8</td>
</tr>
<tr>
<td>Reynella</td>
<td>15.4</td>
</tr>
<tr>
<td>LC10</td>
<td>15.3</td>
</tr>
<tr>
<td>G9V3</td>
<td>14.6</td>
</tr>
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Adapted from Walker and Robinson (2010)
Rootstock Selection

Rootstocks have been selected based on EM38 survey data and historical performance in similar soil types within Coonawarra, with a diverse range of rootstocks being used.
Proactive techniques:
- Site selection
- Clones/rootstocks
- PCD Imagery / EM38
- Trellis type
- Cover crops
- Compost / Mulch

Reactive techniques:
- Bud numbers
- Shoot thinning
- Bunch thinning
- Leaf plucking
- Irrigation management
- Shoot positioning
- Trimming
- Selective picking / sorting
Compost application assists buffer vine heat stress where the terra rossa soils are shallow.
In an effort to increase soil and vineyard biodiversity, and to reduce mid row grass water use, some native grasses (e.g. wallaby grass) are being assessed.
Leaf plucking / shoot thinning /canopy management

Winter pruning, shoot thinning, trimming, and positioning, leaf removal, fruit thinning, soil and irrigation management all play a role in the expression of Coonawarra Cabernet Sauvignon.
Harvest

- At harvest, parcels are selectively picked based on winemaker flavour, tannin, and ripeness assessment of the various soil, vigour, clone and rootstock combinations. Many vineyards are picked over an extended period based on these differences.

- These maps were produced using PCD images before being refined and truthed by fruit assessments in the vineyard with the winemaking team.
Conclusion

• The influence of the vintage, clone and site all impact on the quality of Cabernet Sauvignon. A detailed understanding of these factors and their impact on individual vineyards, and the variability within each vineyard is critical.

• It’s important to have a range of clonal material and management practice due to climatic variability.

• The understanding of vineyard soils, geology, subtle differences in elevation, and local climatic variance and the management of clonal material has been a focus at Wynns with the aim to grow world class Cabernet Sauvignon that best expresses Coonawarra’s potential.
Acknowledgements

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