Exploring the typicity of Australian Cabernet Sauvignon wines

Lira Souza Gonzaga\textsuperscript{1,2}, Dimitra Capone\textsuperscript{1,2}, Susan Bastian\textsuperscript{1,2}, Lukas Danner\textsuperscript{2}, David Jeffery\textsuperscript{1,2}

\textsuperscript{1}ARC Training Centre for Innovative Wine Production, \textsuperscript{2}Dept. of Wine and Food Science, The University of Adelaide

**What is this about?**

- Typicity defines the impact of terroir on a wine, and involves environmental factors, viticultural, and winemaking practices.
- The place of origin could influence the sensory attributes that are unique for a wine.
- Sensory descriptions and overall quality scores of Cabernet Sauvignon wines from Coonawarra, Margaret River, Yarra Valley and Bordeaux were sourced from an expert panel and wine writers for analysis.

**But how?**

- Assessment of 84 Cabernet Sauvignon wines (vintage 2015) by a panel of 11 experts (experienced winemakers and wine judges).

**And what was found?**

### Frequencies of attributes that were significantly different between the regions by Chi-square 1%

<table>
<thead>
<tr>
<th>Region</th>
<th>Savoury</th>
<th>Minty</th>
<th>Leafy</th>
<th>Ripe Fruit</th>
<th>Oaky</th>
<th>Barnyard</th>
<th>Herbal</th>
<th>Spices</th>
<th>Varietal</th>
<th>Fine Tannin</th>
<th>Astringency</th>
<th>Acidity</th>
<th>Sweetness</th>
<th>Olive</th>
<th>Earthy</th>
<th>Red Fruit</th>
<th>Green</th>
<th>Grassy</th>
<th>Firm Tannin</th>
<th>Soft Tannin</th>
<th>Floral</th>
<th>Savoury</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bordeaux</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yarra Valley</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Coonawarra</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Margaret River</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**From the sensory analysis** Word cloud generated from the expert panel. Font size represents how frequently a word was used to describe wine samples that qualified for that medal.

**From the wine writers reviews** Word cloud generated from wine writers’ reviews. Font size represents how frequently a word was used to describe wine samples that qualified for that medal.

**In conclusion, what is the take home message?**

For the expert panel:
- ‘Savoury’ and ‘Barnyard’ were described more frequently in Bordeaux wines;
- Margaret River wines followed by Coonawarra were more frequently described as ‘Minty’;
- Coonawarra and Yarra Valley wines were most frequently associated with ‘Ripe Fruit’.

For the wine writers:
- ‘Oaky’ and ‘Leafy’ were more frequently used to describe Coonawarra, Margaret River and Yarra Valley wines;
- The opposite occurred with ‘Ripe Fruit’ which was more frequently used for Bordeaux wines.

‘Oaky’, ‘Dark Fruit’, ‘Floral’ and ‘Ripe Fruit’ were most frequently used to describe Gold Medal wines by both methods. ‘Green’, ‘Red Fruit’, and ‘Herbal’ were most frequently used to describe wines with no medals by both methods.

Some commonalities that could indicate the typicity for each region and the attributes associated to score level were observed even though both methods resulted in different sensory profiles. In order to have a better understanding on those profiles the next step will involve a descriptive sensory analysis using a subset of the expert panel samples.

**ACKNOWLEDGEMENTS**

The ARC Training Centre for Innovative Wine Production is funded by the Australian Government (ID 170100008) with additional support from Wine Australia and industry partners.

We would like to thank the expert panel for all their great effort and the wineakers that donated their wines and made this project possible.

**FOR MORE INFORMATION**

W: www.arcwinecentre.org.au
E: david.jeffery@adelaide.edu.au

The University of Adelaide

Coonawarra