

# Innovative Techniques in the Winery for Chardonnay production

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# Quotes from Lisa Perrotti-Brown MW

- **You taste a lot of wines from Australia and New Zealand. Is there anything that's particularly exciting you?**
- *Chardonnay in Australia continues to excite, and New Zealand's getting a little bit better but it's only a handful of producers. There are some producers – not just in New Zealand – where you swear they taste nothing but their own wine and they are working in a vacuum!*
- **And Australian Chardonnay?**
- *What I am excited about is that Australians have bounced back from that really lean style, and they've reached a middle ground that's actually very exciting and really interesting. I'm glad that some people have held their ground – like Leeuwin Estate that still makes big, full-bodied, chunky chardonnay. There is such a market for that style. I'd still call it old school, but it's good school*

# Innovative Chardonnay production

## Some thoughts:

- Leaf exposure/reductive potential of the fruit
- Picking times
- Yeast – indigenous from the winery or vineyard
- Timing of the phase of the vintage on fermentation dynamics/yeast species
- Pre-pressing techniques to modify phenolic levels/solids/turbidity
- Whole-bunch fermentation
- SO<sub>2</sub> versus no SO<sub>2</sub> additions pre-fermentation
- Direct to barrel from the press versus tank settling (sequential barrel filling)
- Various turbidity of the juices pre-fermentation (Range 100-500 NTU?)
- Pressing cuts
- No use of Yeast supplements
- Use of bigger format vessels for balance/integration (e.g. 500 litre Puncheons)
- Ageing of some components with elevated FSO<sub>2</sub> to keep tight/reductive
- Lees stirring (yes/no) and frequency/timing
- 2 o'clock barrel aging
- Diacetyl management
- Cherry-picking of components to suit style
- Avoiding use of CuSO<sub>4</sub>
- Elevated FSO<sub>2</sub> at bottling including decline in bottle over time
- Closure (no-brainer)
- Bottle ageing
- Ascorbic acid as an anti-oxidant ☹

# What these 6 wines are:

- 100% Hand picked
- 100% Indigenous alcoholic/MLF fermentation
- Un-chaptalized
- No acidity modification <sup>12</sup>

# What these 6 wines are attempting to be:

- Powerful but restrained
- Positively complex
- Age-worthy
- Tight but uncoiling over time
- Moving away from “jungle-juice” <sup>12</sup>

# What these 6 wines are not:

- Big , fat and blowsy
- High in alcohol
- High input in the cellar
- Expensive to make in the winery
- Full of new oak, particularly small form <sup>19</sup>

# Basic Vineyard considerations affecting winemaking paths

- Site (warm/cool)?
- Soil (Vigour in a wet/dry season)?
- Leaf removal (big style changer)
- Bunch morphology
- Harvest date (reductive potential) <sup>16</sup>







# Harvesting and pre-pressing techniques to manipulate phenolic levels and turbidity

- Hand-pick/whole bunch press
- Hand-pick and crush to press
- Hand-pick and direct press (must pump)
- Machine harvest and skin contact
- Press directly to barrel for fermentation
- Settle in a tank/homogenise after pressing <sup>Ⓟ</sup>

# Wine 1

## 2013 Hawkes Bay Chardonnay

- Whole bunch pressed
- Direct to 500 litre puncheon (this is barrel 1 of 8)
- New Puncheon (Chassin)
- Barrel completely filled
- 40ppm PMS added
- Wait for fermentation to begin
- SO<sub>2</sub> added after ferment on taste (160ppm PMS)
- Stirred as deemed appropriate
- Tight, mineral, flinty blending component

# Wine 2

## 2013 Hawkes Bay Chardonnay

- Whole bunch pressed
- Direct to 500 litre puncheon (this is barrel 8 of 8)
- New Puncheon (Mercurey)
- Barrel completely filled
- 40ppm PMS added
- Wait for fermentation/MLF to begin
- Leave with no SO<sub>2</sub> post fermentation
- Stirred/SO<sub>2</sub> when deemed appropriate
- Fatter, rich complex blending component

# Wine 3

## 2011 Hawkes Bay Chardonnay

- Whole bunch pressed
- Direct to 228 litre barriques,
- Numbered sequentially, each with various turbidity
- 1, 2 year and older barriques
- Barrels completely filled
- 40 ppm PMS added
- Wait for indigenous fermentation to begin
- SO<sub>2</sub>(160 ppm) immediately post fermentation
- No MLF
- 10 months barrel aging.
- Minimal stirring
- Barrel selection based on style/complexity/reduction

# Wine 4

## 2011 Yarra Valley Chardonnay

- 80% Whole-bunch pressed, then overnight settling, racked to puncheon. Lees re-integrated if clean and attractive.
- 30ppm TSO<sub>2</sub> at juice tray.
- 20% whole-bunch fermented (pigeage)  
Pressed at approximately 6 brix, direct to barrel.
- 50% MLF
- No additions/fining agents

# Wine 5

## 2012 Hawkes Bay Chardonnay

- 50% Whole bunch pressed
- 50% Direct to press via must pump
- Direct to 500 litre puncheons, 30% new
- Numbered sequentially, each with various turbidities
- Barrels completely filled
- 40 ppm PMS added
- Wait for indigenous fermentation to begin
- 100% MLF
- SO<sub>2</sub> on taste/freshness/diacetyl
- 12 months barrel ageing
- Fortnightly stirring
- Barrel selection based on style/complexity/reduction

# Wine 6

## 2010 Puligny-Montrachet

- 100% Whole-bunch pressed
- 12-18 hours settling in tank
- Racked to 228 litre barriques, 15 to 20% new
- Aged on lees in barrel for 12 months
- 50% MLF
- High FSO<sub>2</sub> at bottling

	<b>Wine 1</b>	<b>Wine 2</b>	<b>Wine 3</b>	<b>Wine 4</b>	<b>Wine 5</b>	<b>Wine 6</b>
<b>Vintage</b>	<b>2013</b>	<b>2013</b>	<b>2011</b>	<b>2011</b>	<b>2012</b>	<b>2010</b>
<b>Alcohol %</b>	13.4	13.4	12.8	12.8	12.8	13.5
<b>pH</b>	3.14	3.35	3.13	3.32	3.26	3.00
<b>TA (g/l)</b>	8.0	5.5	6.8	6.3	6.5	7.4
<b>MLF</b>	5%	100%	None	50%	95%	50%
<b>Residual Sugar (g/l)</b>	0.5	2.0	1.2	0.5	0.9	1.0
<b>FSO2 @ bottling (ppm)</b>	40.0	low	30.0	34.0	42.0	31.0 (in bottle)
<b>Dissolved CO<sub>2</sub> (g/l)</b>	High	High	0.9	0.75	0.69	?
<b>New oak %</b>	100% 1 Puncheon	100% 1 Puncheon	0%	20% Puncheon	30% Puncheon	15% barrique
<b>Average vine age (years)</b>	8	8	8	25	8	38
<b>Clones</b>	15	15	15 + 95	110V1	95,15, Mendoza	?
<b>Soil</b>	Sandy silt loam on gravel	Sandy silt loam on gravel	Sandy loam on red metal gravel	Red Basalt	Sandy silt loam on/and gravel	Calcareous clay

