

MERLOT CLONES

Q45-14

8R

D3V14





Background

- Widely planted in Australia during the mid-late 1990's and 2000's across a range of regions and soil types
- 4th highest variety with 11,000 Ha
 - 1988- 946 tonnes
 - 2007- 90,000 tonnes
- An important variety, but viticulturally challenging (clonal???)



Merlot (D3V14)- viticulture

- Merlot, in particular the D3V14 clones, produces vines with low shoot vigour and high fruit:leaf area ratios which can lead to excessive bunch exposure and delayed ripening.
- Low yields are crucial for adequate canopy development, rapid and full ripening and consistent quality.
- Merlot can be ‘sooky’
- Merlot is susceptible to dry soil conditions
- Crop manipulation and increased water and fert. inputs to essential for premium wine production
- ➔ High cost of production for both commercial and premium products



Smith and Hooper

- Recognised potential of Wrattenbully for premium merlot production
 - Climate- moderate temperatures and low-moderate rainfall during ripening.
 - Soils- clay based (good water-holding capacity), rich in iron (well-structured), limestone (free-draining)
- Aim to produce an icon merlot



Merlot- Canopy Management

- VSP leads to ‘Rib-Cage’ effect
 - Bunch clumping
 - Increased canopy density
- ‘Lazy Nettlebeck’- 50% of shoots captured in wires
 - Better utilises leaf area
 - Higher degree of dappled light in fruit zone
 - Greater air-flow
 - Cheaper (savings of approx. \$240/Ha)



Merlot-Pruning

- High fruit:leaf area ratio, therefore keep bud-numbers low
- 18-22 buds/m



Merlot-fruit/shoot thinning

- Aim of shoot/fruit removal:
 - Manage yield
 - Enhance canopy development and ripening
 - Reduce bunch clumping
- Timing critical to max. effect and minimise costs



Merlot-fruit/shoot thinning

- Shoot thinning to remove non-count or doubles at 20cm (EL-14)
 - Negative: re-shooting/poor set
 - Positive: costs half of later thinning(\$340/Ha vs \$740/Ha), less man-handling
- Where bunch number high, inflorescence removal prior to cap-fall
 - Half the cost of later removal (\$390/Ha vs \$700/Ha)



Merlot-fruit/shoot thinning

- Bunch removal only occurs in icon blocks in heavy years
- Undertaken as early as possible (pre-veraison) to maximise effects
- Hot weather avoided + shoots brushed upwards to avoid negative effects associated with man-handling
- \$954/Ha



Smith and Hooper Reserve Merlot

- Tastes nice....so all hard work and investment worthwhile, however could it be made easier with clonal selection??



Smith and Hooper Reserve Merlot

- Q45-14, 8R and D3V14 planted in 2001
- 2 Ha
- Grafted to 1103 Paulsen
- Commercial trial wines produced in 2008 and 2009



- **8R and Q45-14 produce higher shoot vigour and lower fruit:leaf area ratios → better balance**
- **8R and Q45-14 have lower berry and bunch weights than D3V14 (replicated trial data)**
- **8R and Q45-14 early ripening**
- **8R and Q45-14 selected for reserve label in 2009**



2009 Harvest Data

Clone	Bunch wt (g)	Berry wt (g)	Berries/bunch	Yield (t/ha)	Bunches/m	Harvest Baume
8R	99.8	1.19	84	12.48	34.4	13.6
Q45-14	131.8	1.25	105	11.41	23.8	13.6
D3V14	100.8	1.32	76	8.87	24.2	13