Department of Primary Industries and Regional Development

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Performance of Cabernet Sauvignon clones in Margaret River

Richard Fennessy[1], Yu-Yi Liao[1], Ben Nestor[1]
[1]Department of Primary Industries and Regional Development

Exploring how clonal selection can influence attributes such as yield, bunch weights, bunches per vine and timing of key phenological stages.

Background

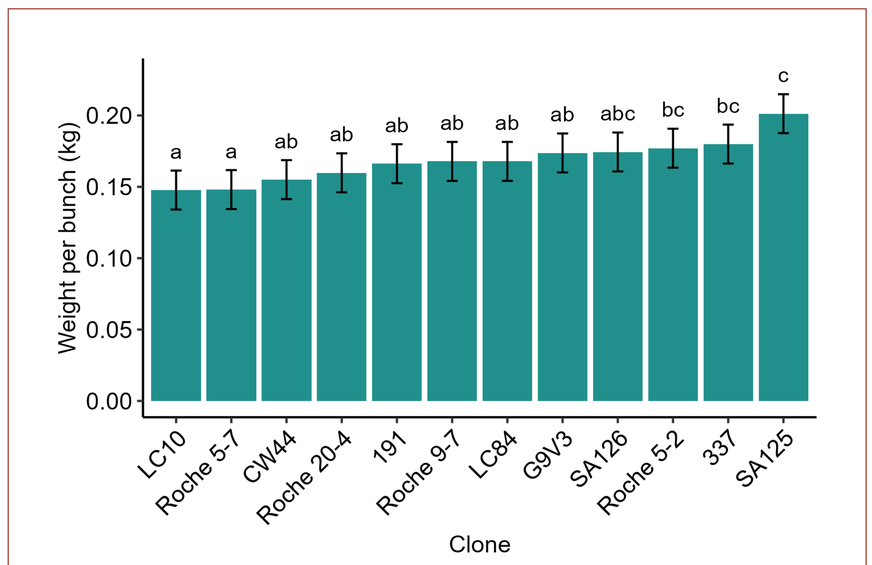
To understand the potential and performance of 12 diverse clones, a trial site in Margaret River was established in 2019. The 1-hectare site of 20-year-old Cabernet Sauvignon vines (clone SA126) were field grafted, with the clones dispersed throughout the block in a modified Latin square design with replications. Beginning in the 2021/22 growing season and using 3 of the replications, key phenological stages have been observed as well as the collection of viticultural data and small-lot winemaking each season since.

Key findings

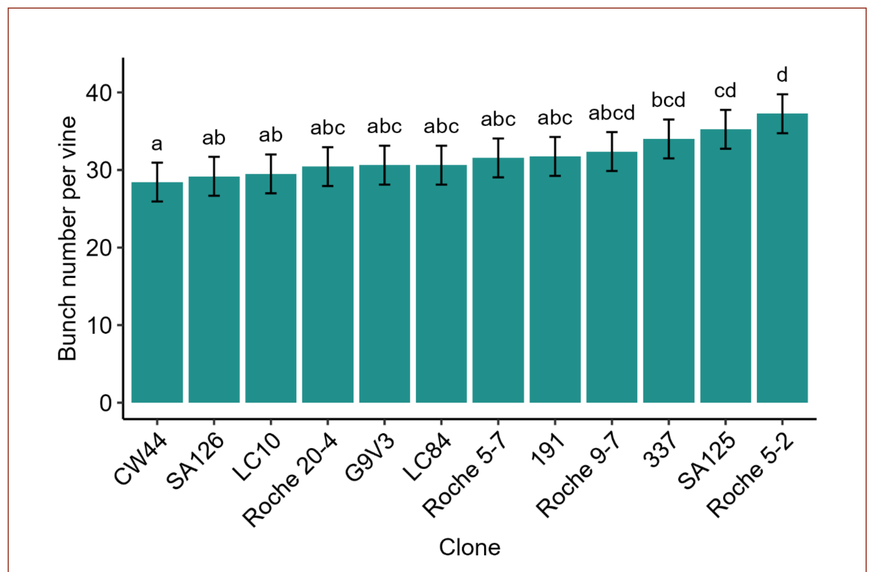
Using two-way ANOVAs to interpret data collected from 4 growing seasons shows statistically significant differences on viticultural parameters consistent across the seasons.
Predicted bunch weights ranged between 148 g to 201 g (35% difference) and bunch numbers per vine showed a similar difference with a range between 28 and 37 bunches. Yields varied significantly from 4.3 kg to 7.1 kg per vine.
Clones SA125, Roche 5-2 and 337 are typified with heavy bunches, high bunch numbers and high yield, conversely LC10 and CW44 exhibited lighter bunches, lower bunch numbers and less yield.
Averaged dates in the clonal expression of key phenological stages are visualised below. Berry weight and tannin profiles between the clones are less conclusive due to data limitations.

Origin	Clone	Budburst							Flowering				Veraison			Harvest							
		SEP/OCT							NOV				JAN			MAR							
		28	29	30	1	2	3	4	23	24	25	26	29	30	31	15	16	17	18	19	20	21	22
Swan Valley, WA	Roche 5-2																						
Swan Valley, WA	Roche 5-7																						
Swan Valley, WA	Roche 9-7																						
Swan Valley, WA	Roche 20-4																						
Bordeaux, France	191																						
Bordeaux, France	337																						
Nuriootpa, SA	SA125																						
Nuriootpa, SA	SA126																						
Coonawarra, SA	CW44																						
Langhorne Creek, SA	LC10																						
Langhorne Creek, SA	LC84																						
Livermore Valley, California	G9V3																						

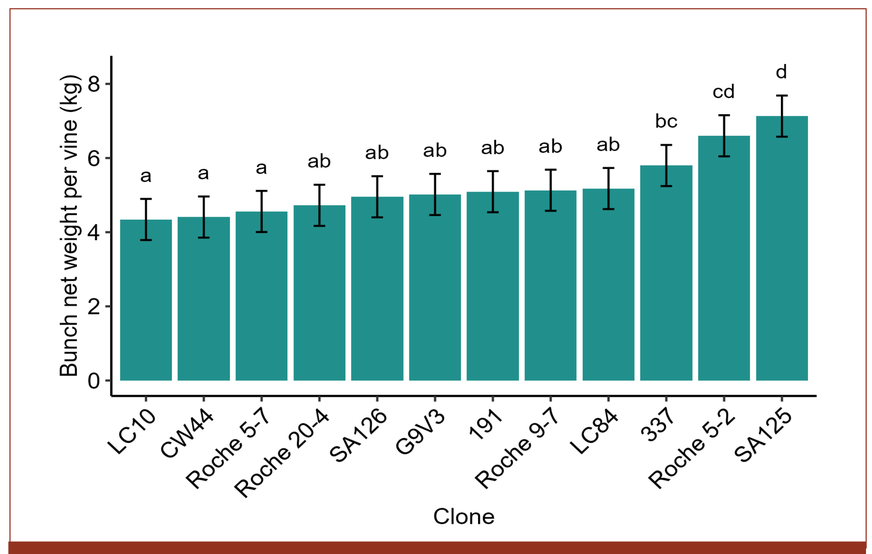
Phenological observations 2021 - 2025



Bunch weight



Bunches per vine



Yield

Conclusion

These performance insights support producers when considering which clones suit their needs and specific sites, while also demonstrating that clones have the potential to alleviate production logistics during compressed vintages.

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