

Effect of shoot trimming on Yield, Fruit Maturity and Reserves in Malbec vineyards under single high wire trellis system



Introduction

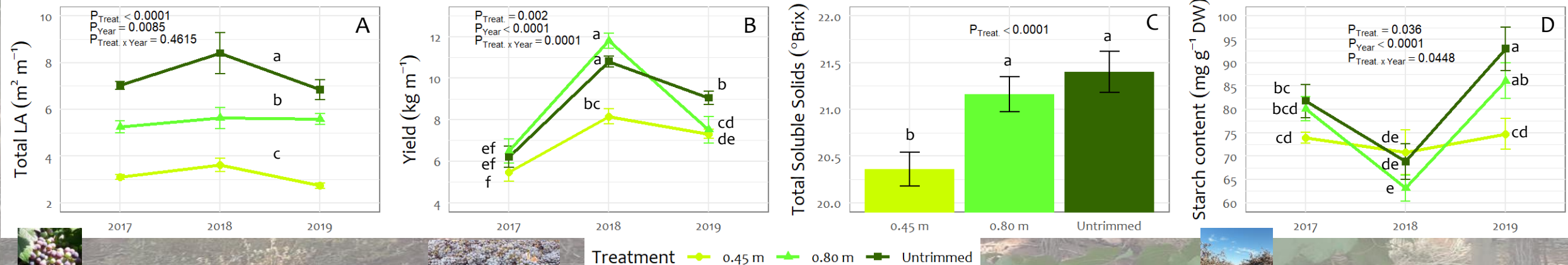
Malbec is Argentinian's emblematic variety being Mendoza its most important wine region. Vineyards for wine production are mainly conducted in the VSP trellis system. The single-high wire (SHW) system is a highly-productive, free cordon trellis system that is widespread in many important wine regions of the world. Our objective is to evaluate, for the first time in Argentina, the effect of different shoot trimming levels on leaf area (LA), yield, grape maturity and reserve levels of Malbec from SHW-trellised vineyards in Mendoza (Winkler V).



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Materials and Methods

We imposed different shoot trimming heights (0.45 m, 0.80 m and untrimmed) during three growing seasons (2017, 2018 and 2019) and measured LA, yield and fruit composition, and structural reserves in trunk at leaf fall.



Verasion



Harvest



Leaf fall

Results: Untrimmed treatment had 30% more total LA than 0.85 m and 60% more than 0.45 m (A). 0.80 m treatment presented the highest yield on the second year, then it decline to similar yield than 0.45 m because of the reserves consumption (B, D). Untrimmed and 0.80 m treatment produced more total soluble solids than 0.45 m (C). Untrimmed treatment presented stables and high yield and starch trunk levels.

Conclusions: The untrimmed treatment produces higher sustained yields over time, with high levels of reserves and grape maturity.