Effect of yield manipulation on the aroma composition of Central Otago Vitis vinifera L. cv. Pinot noir

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Poster Abstract

The quality and typicity of a wine are often determined by its characteristic aromatic volatiles. Despite being New Zealand’s most southerly winegrowing region, Central Otago is known to produce high quality wines, particularly Pinot noir. The influence of cropping level on the aromatic composition of wines made from Vitis vinifera L. cv. Pinot noir harvested from Central Otago was determined for two consecutive years: 2009 and 2010. Nine nominated plots within three vineyards at different sites were bunch thinned to varying yields from five to seven tonnes per hectare and later harvested at 24° Brix. Wines from each block were made on a commercial level in one tonne vessels. The concentrations of over 80 aromatic compounds were determined via HS-SPME GC/MS on the wines taken prior to malolactic fermentation. Significant differences were observed amongst certain groups of compounds, particularly the terpenes, norisoprenoids, C6-alcohols and cinnamates. Yield manipulation had a significant impact on grape-derived aroma compounds, and more so than vineyard location.