

Predicting Regional and Sub-regional grapevine yields in Marlborough

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Poster Abstract

The first step to successful wine making is managing fruit to an appropriate composition. This requires anticipating and then managing vineyards to achieve an appropriate yield. Anticipating vine yield (both at a vineyard and regional level) is also important as this is the first step in the supply chain. Excessive yields may mean there is insufficient processing capacity and has in recent years resulted in downward pressure on grape and wine prices. In contrast, low yields result in a potential shortage, where market development may be compromised, thus enabling competitors to move into a market being developed by New Zealand companies.

A temperature-based model has been developed to predict yield components of Sauvignon blanc, Chardonnay and Pinot noir in Marlborough. Initial predictions are made after bunch initiation, approximately 15 months before harvest. Using historic flowering temperature data, a risk analysis provides a probability of any specific yield being obtained. The prediction is updated after flowering. Of particular interest is the differences in bunch yield components (berry number and berry weight) observed between the various varieties.