

ABSTRACT

DETERMINATION OF GRAPE AND WINE SENSORY ATTRIBUTES RESULTING FROM DIFFERENT PRUNING AND IRRIGATION PRACTICES ON THE SYRAH (*VITIS VINIFERA* CV.) CULTIVAR

A sensory evaluation technique was developed to assess the flavor profile of Syrah (*Vitis vinifera* cv.) wine grapes grown under different pruning and irrigation treatments. Principal component analysis (PCA) of the data revealed that hand pruned vines produced grapes with strong fruity, herbaceous, and berry-like characters when subjected to moderate or high degrees of water stress. Under the same levels of water stress, the mechanically pruned vines produced grapes that had spicy, black pepper, and fresh herb characters. For both hand and mechanically pruned vines, the low water stress treatments were more dissimilar and did not correlate well with any distinct flavor attributes in the data set. The grapes were processed into wine and the same techniques were reapplied. The data showed that flavor profiles of grapes were not indicative of wine flavor profiles. Furthermore, many flavor attributes in grapes were negatively correlated with the same attributes in wine.

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