Technical note

HARVESTING AND BLENDING OPTIONS FOR LOWER ALCOHOL WINE

Introduction

In recent years, the trend of wine alcohol content increasing by 0.1-1.0% per year has been observed. This may be due to warmer climates and consumer preferences for more fruit-driven, ripe wine styles [1]. Because of a demand from healthy and socially conscious consumers, as well as higher taxes based on alcohol content in some jurisdictions, lower alcohol wines have been introduced. However, these products have had variable consumer acceptance, partially because of unsatisfactory organoleptic attributes [2]. Better wines of lower alcohol content are needed. This study investigated the potential application of a wine-blending strategy for producing wines of lower alcohol (≤ 11.0% v/v), which retain sensory profiles similar to the fuller-strength equivalent [3]. Verdelho and Petit Verdot wines from early harvest grapes were blended (50:50) with the corresponding wines that had been produced from much riper fruits.

The key outcomes

The results of descriptive sensory analysis suggest that Verdelho and Petit Verdot blends maintained sensory profiles similar to those of the wines made from the more mature fruit (H2), despite being prepared from less ripe grapes (H1). Verdelho H1 wines were characterised by 'citrus', 'herbaceous' and 'acidity', and VH2 were associated with 'apple/pear', 'tropical fruit', 'rockmelon', 'hay' and higher 'alcohol', 'bitterness' and 'sweetness'. Petit Verdot H1 wines were perceived higher in 'red fruit', 'green pepper', 'tomato leaf' and 'acidity', while the PVH2 wines were dominated mostly by 'dark

fruit', 'black cherry', 'plum', 'black pepper', 'alcohol' and 'astringency'. The blended samples were positioned in the middle, between the two harvest wines, which probably indicates that blending had resulted in an averaging effect on their chemical and sensory profiles. However, it was found that unripe sensory descriptors such as 'herbaceous' for Verdelho, and 'tomato leaf' and 'green pepper' for Petit Verdot, were not detrimental attributes in the blended wines.

Recommendations

Not surprisingly, the earliest-harvest wines of both varieties had high concentrations of titratable acidity, particularly malic acid, so it would be worth considering deacidifying wines to an acceptable commercial level prior to blending.

What's next?

Further studies of Shiraz wines with a different range of alcohol levels and blending ratios have been investigated, together with partially dealcoholised treatments, which were produced using membrane- based technology (reverse osmosis followed by membrane contactor).

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