POSTER

Managing extraction of colour, tannin and methoxypyrazines in Pinot noir grapes treated by leaf removal

Bin Tian[1,*], Pradeep Wimalasiri[1], Roland Harrison[1], Ivan Donaldson[2], Belinda Kemp[3]
*Corresponding author: bintian@lincoln.ac.nz

[1] Faculty of Agricultural and Life Sciences, Lincoln University, Lincoln 7647, New Zealand.
[2] Pegasus Bay Winery, Glasnevin 7482, New Zealand.
[3] NIAB, New Road, East Malling, Kent ME19 6BJ, United Kingdom.

Keywords: grape tissues, mDP, Pinot noir, tannin extractability

ABSTRACT

Managing extraction of tannins and green aroma compounds attributed from methoxypyrazines in winemaking is crucial for producing high quality Pinot noir wine. This study[1] investigated the impact of leaf removal on concentrations of anthocyanins, tannins, and methoxypyrazines in Pinot noir grapes and resultant wines. Leaf removal was conducted at 7 days (LR7), 30 days (LR30), and 60 days (LR60) after flowering, and the no leaf was removed in the control treatment (LRC). Leaf removal could significantly increase the concentration of anthocyanins in Pinot noir grapes and reduce the concentration of methoxypyrazines, especially in grape stems, in comparison with the control treatment. Early leaf removal (LR7 and LR30) showed greater effect on enhancing the colour density, polymeric pigments, and tannin concentration in the resultant wines. LR7 treatment showed significantly higher proportion of skin-derived tannins in resultant wine, compared to LRC. Although the aroma analysis of resultant wines showed significant differences between treatments, the impact of leaf removal on the aroma profiles was not evident by the sensory evaluation. These findings offer valuable insights for managing the extraction of colour, tannin and methoxypyrazines in Pinot noir wines, enabling winemakers to optimize quality through targeted viticultural and winemaking practices.

REFERENCES

[1] Wimalasiri, P. M., Harrison, R., Donaldson, I., Kemp, B., & Tian, B. (2024). Timing of leaf removal modulates tannin composition and the level of anthocyanins and methoxypyrazines in Pinot noir grapes and wines. Food Research International, 178, 114003.