Influence of pruning time on Sauvignon Blanc grapevine yield, fruit composition and vine phenology

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Poster abstract

The start of cane pruning grapevines is traditionally delayed in Marlborough, New Zealand until after leaf fall, when carbohydrate reserve accumulation and cane maturity are believed to be complete. However, by starting immediately after harvest, the pruning period may be increased by at least four weeks, reducing peak labour demands during the busy winter hand-pruning cycle. Trials were conducted to investigate the consequences of various pruning times on Sauvignon blanc grapevine phenology and yield. Vines were pruned to either 2 or 4 canes per vine (low to high cropload) at one of four times during the autumn-winter-spring period, from shortly after harvest, while vines were still in green leaf, right through to bud break in the spring. Pruning shortly after harvest caused no significant adverse effects on vine phenology or productivity in the subsequent season. Pruning just before bud break slightly delayed vine development compared to earlier pruned vines. Carbohydrate reserves stored in the trunk were unaffected by pruning time or cane number (crop load). Carbohydrate reserves accumulated in the trunks of grapevines to adequate concentrations by harvest and any post-harvest photosynthesis from attached green leaf that may have been occurring at this time had little effect on reserves or subsequent vine growth and development. In cool climates where leaves senesce at or shortly after harvest, pruning immediately after harvest will have no adverse effects on subsequent vine productivity, but will extend the period available to prune the vines, reducing the peak labour demand in the vineyard. Pruning in early spring delayed bud break and may be an advantage where vines are at risk to spring frosts, hence potentially providing greater tolerance to late spring frosts.

Keywords: labour demand, grapevine phenology, productivity, pruning time, carbohydrate reserves, Sauvignon Blanc